M/053/005

USMX

September 30, 1993

RECEIVED
OCT 08 1993
DIVISION OF
OIL, GAS & MINING

Ms. Debbie J. Pietrzak
Area Manager
U.S. Department of the Interior
Dixie Resource Area Office
237 North Bluff St.
St. George, UT 84770

Reference: **Location of the Caribou Pit**

Dear Ms. Pietrzak:

Enclosed are two (2) maps which show the current location of the Caribou pit and the old plan location. You will note that the current location involves a total of 4.1 acres of disturbance rather than the 11.0 acres which was shown in the previous plan. Also there will be only .4 acres of unreclaimed highwalls rather than 3.0 acres.

In regard to the cultural clearance, we feel that clarification should be made that the Goldstrike staff is aware of the locations of cultural sites as identified by the archaeological survey. We were fully aware that there were no cultural impacts at either pit location. We apologize for the lack of correlation with your office in changing the pit location but did not think there would be a problem. We moved the pit west on the same hill slope and downsized the disturbance by a scale of 2.5.

We are also enclosing copies of water tests from MW7 and our preliminary report on the August 25th and 26th rainfall washout on leach pad #2.

If you have any questions, please do not hesitate to call me at 574-3269.

Sincerely,

USMX OF UTAH, INC.

Robert K. Wilson
Environmental Coordinator

RKW:bas
cc: W. Hedberg, UDOGM

USMX of Utah, Inc.
P.O. Box 2650, St. George, Utah 84770
(801) 574-3164 FAX (801) 574-3269
NASDAQ Symbol - USMX

USMX

Goldstrike Mine

Preliminary Report on Rainfall and Subsequent Erosion Event Beginning August 25, 1993

Summary

A major rainstorm occurred at the Goldstrike Mine beginning around 11:00PM on August 25, and ending around 3:00AM on August 26, 1993. A total of 4.14" fell during this period, 4" of which fell within 2.3 hours. Massive erosion occurred at the minesite and throughout most of Western Washington County during this event. Two surfaces on the Northwest face of heap #2 experienced runoff so great that erosion channels were cut into the side of the heap. Ore material washed from these channels, breached the berm of the heap, and escaped the fluid management system. Approximately 2,000 tons of material (by truck count of material removed) eroded from the heap surface and breached the berm. Response to both the rainfall event and the breach of the containment berm was immediate, aggressive, and complete. Management immediately mobilized the manpower and equipment needed to deal with the breach. Barren solution being applied to the heap area where the breach occurred was diverted to other portions of the heap as soon as the overall operation was stabilized. Treatment of drainage solutions and the area onto which the heap material had eroded also commenced upon securing the overall operation. Sampling of all drainage's was performed the same morning, again on August 30, and will be performed once again on September 7, 1993. Approximately 1.4 lbs of cyanide was released from the fluid management system. This is substantially less than the U.S. EPA de minimus reporting limit of 10 lbs. The rest of the facilities are in fine condition and did not suffer significant damage. Only 4.9 million gallons of the 8.1 million gallon total solution pond capacity was used by the afternoon of August 30, 1993; this after a normal 0.73 inches of rain had fallen that day in addition to the August 25, 1993 event. Notification of this event was given the afternoon of August 26, 1993 to the BLM--Dixie Resource Center,
the Utah Division of Water Quality, the Utah Division of Oil, Gas, and Mining, and the Southwest Utah Health Department. Results of the last set of samples should indicate if there is any reason to pursue additional sampling and analyses. Enclosed with this preliminary report are topographic maps showing the location of the erosion surfaces and the breach, several photographs of the erosional surfaces and the breached berm, and a topographic map showing the locations and general direction from which these photos were taken.

Rainstorm Event

A major rainstorm occurred at Goldstrike beginning around 11:00 PM on August 25, and ending at 3:00 AM on August 26, 1993. An accumulation of 4 inches of rain fell within the first 2.3 hours of this storm. A total of 4.14 inches had fallen by the time the storm ended. This obviously exceeds all accumulations for a 100 year-24 hour event which

would produce 3.4 inches of rain within a 24 hour period. Extremely heavy rain also occurred in the cities of Saint George, Santa Clara, Veyo, and Gunlock.

Erosion by Runoff

Massive erosion occurred at all drainage's around the Goldstrike Mine including those which are not easily nor typically eroded by rainstorms. This scenario was evident throughout the Goldstrike District and much of Western Washington County.

Of particular concern to USMX is the significant amount of erosion which occurred on 2 heap surfaces (within 100 yards of one another) on the Northwest face of Pad 2 just East and uphill from the crusher site (see enclosed topographic maps of erosion area). Elevation is 5375' at the top of the heap slope which eroded. Roughly 2,000 tons of material (now by truck count) was carried approximately 75' vertical downward from both erosion areas, over the top of the berm, and into a lower access roadway between the pad and the upper access roadway. Much more material was washed from the Western most erosional surface than the Eastern most surface. Volumes of material washed from the larger erosional surface were estimated by Doug Moore, mine superintendent, and were reported to Jim Smith, mine manager.

The erosion surface material was ore that had been crushed and placed on the heap on August 3rd. It had been under leach since that time. The location of the erosional surface is due directly North of the current heap haulroad which is well compacted due to haul truck traffic. The section of this road that drains toward the North is approximately 52' wide and 500' long. A berm is in place along the edge of this haulroad approximately 150' South of the heap highwall. An estimate of the volume of water which flowed from the haulroad surface was prepared by Robert Wilson, environmental coordinator. His analyses indicates that 4" of fall-on (i.e., 2.5 gallons per square foot) over 26,000 square feet would yield 65,000 gallons of water during the 2.3 hours of most intense rainfall. Calculation indicates this is equivalent to 464 gallons per minute falling just on the haul road.

On the larger and most Westerly erosional surface, the ore had been ripped radially away from, and perpendicular to the lift highwall before commencement of leaching. The resulting erosional surface demonstrates that the water traveled through the ripped channels and outwardly over the edge of the heap picking up momentum and debris. On the smaller and most Easterly erosional surface however, the ore had been ripped parallel to the lift highwall, yet the runoff topped these ripped furrows and proceeded to erode this surface as well. Runoff from the heap concentrated at these 2 low points apparently in much greater quantities than at any other locations on any of the other heaps. Such major erosion was not seen on any other heap surface. Breaching of the parallel ripped surface that drains the smaller area tends to indicate that the radially ripped surface would have been breached by runoff regardless of the ripping direction.

Normal process solution flow inside the bermed area and runoff flow outside the bermed area was dammed by the eroded material that breached the berm. Runoff from below the

breach point continued to drain down the lower access road to the main haul road. From the main haul road some of the runoff drained across the roadway and into the East Hamburg Pond, and some drained in the drainage ditch to the sedimentation dam.

Several other infrastructure components sustained various amounts of damage due to the runoff. Approximately 1,000' of water line from the DI ranch was washed out and is being rerouted. Several roadways, especially in the canyons, sustained substantial flooding and erosion. Sump 2 was found with solution running through the secondary containment pipe. Close inspection of this pipe exposed a collapsed section of pipe approximately 100' long, most likely due to suction created by plugging the sump with debris while the line was in full flow. The pipe has returned closer to round after relieving the weight from above and preparations are underway to replace this section of pipe.

Overall the ponds looked good. No flow was detected into any of the pond sumps indicating that the repairs made in March and April, 1993, did stop the flow of water through the primary liner system.

Response

Response to the storm by Goldstrike operations was immediate, aggressive, and complete. Operators on site at the time realized the magnitude of the storm, detected the breach during the storm, informed mine management immediately, and continued to monitor and maintain the facility. Mine management responded immediately to the call by the operators, worked their way into the minesite, assessed the situation, and mobilized the manpower and machinery needed to expedite remedial efforts. Corporate staff in Denver was mobilized immediately upon assessment of the situation and arrived on site by noon that day, within 9 hours after the erosional surface had been detected. A third party consultant familiar with the mine was informed of the situation by 5:00 AM that morning and was on site the next morning.

A rough chronological accounting of the activities at the minesite follows:

11:00PM -- 8/25/93

An operations crew that could not reach the mine due to heavy runoff called Jim Smith at 11:30 PM to report the major rainstorm. Jim Smith left his home immediately for the minesite.

1:00AM -- 8/26/93

At approximately 1:30 AM, the process operators reassessed the magnitude of the storm and notified Jim Smith about the severity of the storm by mine radio. Jim was being held up several miles Southeast of the DI ranch by massive flooding across the Washington County road. Trees uprooted by the runoff were literally floating across portions of this road. At this time Jim Smith told the process operators 1) to call Emer Henrie with H&H to mobilize his equipment, 2) to call a Brown & Root employee to get a dozer working on the canyon road, and 3) to have Kelly Baetz, a Goldstrike process operator, bring a loader down the canyon to deliver personnel across the runoff channels. At approximately 2:00 AM, the process operators saw that material had flowed from the erosion surface on pad 2 and had breached the containment berm. Mike Stein, another Goldstrike process

operator, contacted Jim Smith by mine radio immediately and discussed this situation with him. Jim Smith instructed Mike to call Dan Slyter, process superintendent, about the situation.

3:00AM -- 8/26/93

Jim Smith, H & H, and Brown & Root continued to pull logs from the road to gain access to the mine. Upon gaining access a caravan of personnel had assembled and advanced on the road to the mine. The group included personnel from the Goldstrike night crew, H & H, Brown & Root, Dan Slyter, and Jim Smith. This group met Kelly Baetz in the loader at the mouth of the first canyon but were able to continue to gain access with the 4-wheel drive vehicles. By 4:30 AM, mine management was on site assessing the situation and mobilizing the appropriate pieces of equipment to deal with the erosion material that had breached the containment berm. Jim Sittner, Group Mine Engineer, was called at 4:45 AM and made aware of the situation. Richard Jolk, Chief Metallurgist, was called at 4:50 AM, was on the 7:00AM flight to St. George via Salt Lake City, and was on the mine site by noon that day.

5:00AM -- 8/26/93

By 5:00 AM, there was enough light and the runoff had slowed to a point that there was an opportunity to route all barren solution to different pad areas. By this time H & H, and Brown and Root were mobilizing equipment to move material back up onto the heap and clear roads for vehicle access.

7:00AM -- 8/26/93

The staff arrived from town as normal. Jim Smith and Robert Wilson toured the facility to continue assessment and evaluation of the situation. By 8:00 AM the equipment was in position to continuously extract the eroded material by backhoe, transfer it to the small loader, transfer it again to the large loader, and finally transfer the material to a haul truck for final deposition on the heap. Two pumps were placed above the erosion flow, one inside the berm and one outside the berm, to deliver water back into the solution management system.

9:00AM -- 8/26/93

Excavation of the eroded material continued as did pumping of solutions back into the fluid management system. Samples for in house analyses of cyanide had already been pulled to give some indication of the cyanide concentration in the solution behind the material that had eroded. This solution assayed 20 ppm CN_{free}. A bucket was used to measure the amount of solution being pumped out of the eroded material in order to estimate the amount of solution that had left the containment area. The pump was keeping up with the flow in at 15 gpm. It is estimated that solution flowed at this rate out of the eroded material from 1:00AM to 10:00AM for a total of 9 hours. Calculation using these figures indicates that 1.352 lbs of cyanide escaped the fluid management system due to this event.

11:00AM -- 8/26/93

Robert Wilson lined out a hand to take samples for certified laboratory analyses from various points around the spill, in the East Hamburg Pond, in the Sediment Dam, and downgradient from the facilities.

By this time the situation was already significantly diffused giving management a chance to regroup and reassess the events of the night. Clean-up and sampling continued into the next few days, however the main event was over.

Treatment

A total of 1,500 lbs of PPG industrial calcium hypochlorite with 65% available chlorine was used within the first two days after the storm to treat 1) the solutions which came off with the eroded material and 2) the areas on which the eroded material had rested. Treatment of solutions and material began at 11:00AM on 8/26/93. A summary of these dosing's was prepared by Dan Slyter and are summarized below.

Calcium Hypochlorite Usage

time	date	location	quantity used
11:00AM	8/26/93	Leach Pad #2 Erosion Area	100 lbs
12:00NOON	8/26/93	East Hamburg Pond	200 lbs
2:00PM	8/26/93	East Hamburg Pond	100 lbs
6:00PM	8/26/93	East Hamburg Pond	100 lbs
1:00PM	8/26/93	Sediment Dam	200 lbs
6:00PM	8/26/93	Sediment Dam	100 lbs
8:00PM	8/26/93	Sediment Dam	100 lbs
8:00PM	8/26/93	Sediment Dam Upstream Drainage	400 lbs
8:00PM	8/27/93	Sediment Dam	200 lbs
		Total:	1,500 lbs

Sampling

Many samples were taken by mine operations for on site analyses in addition to the samples taken for analyses at a certified laboratory. Samples sent to a certified laboratory will be analyzed for metals, major ions, nutrients, and the cyanides (total, weak acid dissociable, and free) and are summarized below:

Sampling of Various Solutions After the Storm Event and Erosion of Pad #2

time	temperature	pH	location
10:30AM	21.8C	8.2	Seepage below the eroded material
10:45AM	20.8C	8.2	Seepage from base of Pad #2 extension fill
11:00AM	17.5C	9.0	East Hamburg Sediment Pond
11:15AM	18.7C	7.9	Sediment Pond
11:30AM	17.8C	8.0	Arsenic Gulch above Sediment Pond confluence
12:00NOON	17.4C	8.1	Arsenic Gulch below Sediment Pond confluence Just Before EFBDW
12:15PM	19.4C	8.5	EFBDW* above Arsenic Gulch confluence
12:30PM	19.2C	8.2	Uppermost crossing on EFBDW
1:00PM	21.6C	8.3	Lowermost crossing of EFBDW
2:00PM	27.5C	8.0	Mouth of EFBDW above MBDW** confluence
2:15PM	24.9C	8.2	MBDW below EFBDW confluence

*EFBDW -- East Fork of Beaver Dam Wash

**MBDW -- Main Beaver Dam Wash

Pond Levels

Summarized below is the day-by-day pond level for all of the solution ponds at Goldstrike. This table is presented here with a cumulative column included.

Solution in Ponds Measured Daily @ 8:00AM (thousands of gallons)

Date	Preg	Barren	Recycle	Fresh	Rinse	Pad #2	Sum
8/25/93	150	650	0	600	0	0	1,400
8/26/93	750	1,000	400	600	0	0	2,750
8/27/93	800	900	400	600	400	100	3,200
8/28/93	600	900	400	600	1,100	300	3,800
8/29/93	400	1,000	400	400	4,800	400	4,400
8/30/93	500	900	400	400	2,200	500	4,900

Interestingly, only 3.2 million gallons of process solution filled the ponds by the afternoon of 8/27/93, over 36 hours after the storm was over. Another rainstorm of normal proportions yielding 0.73 inches of rain occurred on 8/30/93. Total pond capacity at Goldstrike is 8.1 million gallons. This demonstrates that the Goldstrike facility is easily equipped to handle a 100 year-24 hour event (3.4" in 24 hours) considering that there is still 3.2 million gallons of extra capacity in place after a 4.14" rainstorm followed less than 5 days later by a 0.73" rainstorm.

Notification

Robert Wilson began calling the various agencies at 12:30 PM on 8/26/93. A list of the individuals and agencies notified are as follows:

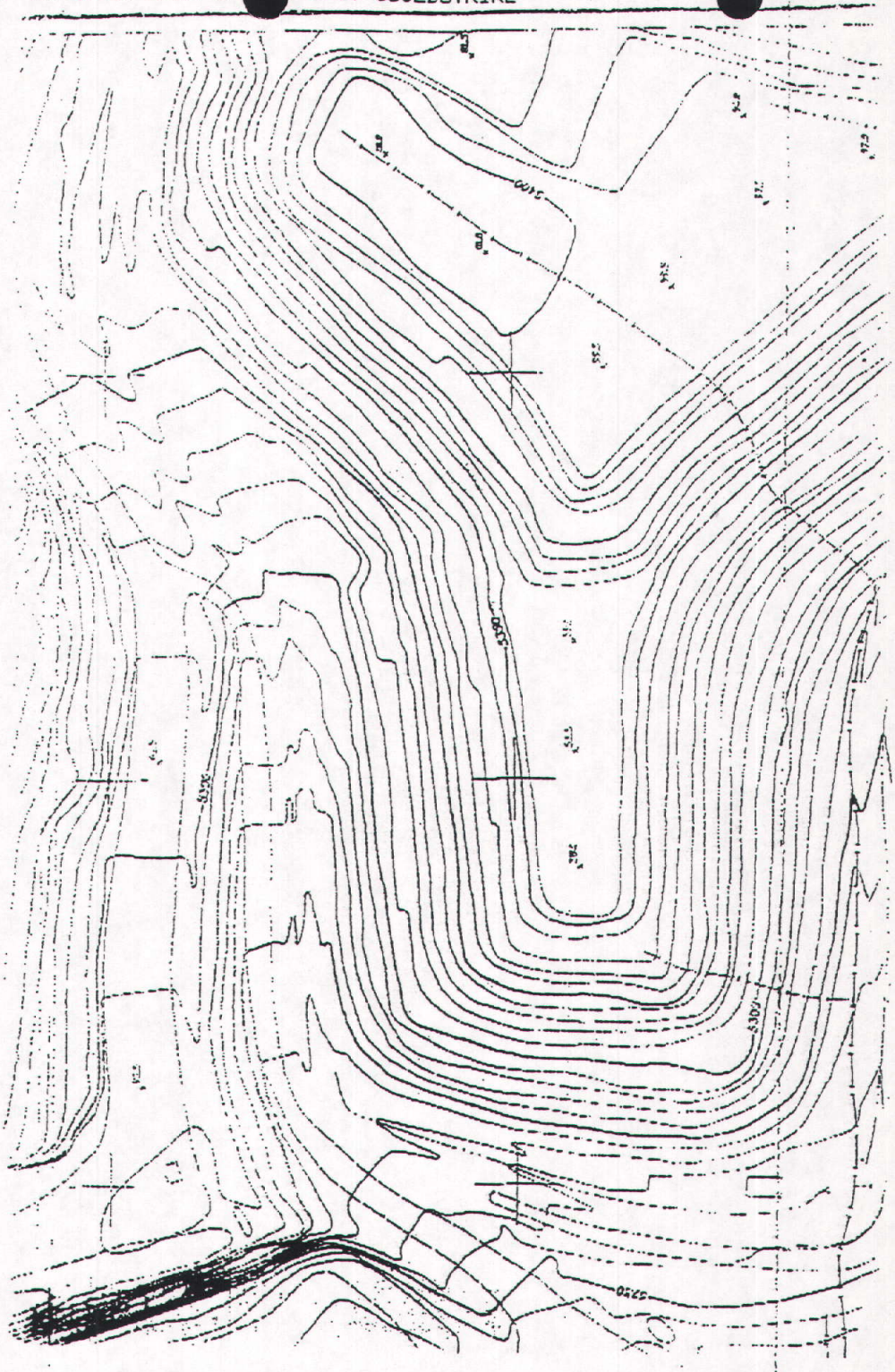
Times, Individuals, and Agencies Notified

Time	Individual	Agency
1:00PM	Larry Gore	BLM--Dixie Resource Center
1:20PM	Don Hildon	DWQ
2:50PM	Wayne Thomas	Southwest Utah Health Department
4:45PM	Lowell Braxton	UDOGM
4:50PM	Lyle Stott	DWQ

Final Disposition and Resolution

All eroded material has been cleaned from the spill area. This includes an additional 6" of native material onto which the spill occurred. All of this material has been deposited back on heap #2. Standing water in both the Sediment pond and East Hamburg pond has been sampled and treated until virtually no residual cyanide was detected. One more set of samples will be taken in the effected area for certified laboratory analyses of cyanide on Tuesday, September 7, 1993. Some additional sampling could be performed at the location where the eroded material breached the berm, on the drainage's in which contaminated runoff flowed, and at the ponds. Due to the amount of runoff that traveled through these areas it is expected that any samples taken in these areas would be void of cyanide.

BERM
PAD 2
N 5,000 E
CRUSHER AREA
N
CURRENT TOPOGRAPHY
R. Tew 8/26/93


5400
5300
5250

#1. ON PAD HAULAGE ROAD SLOPING TO BERM AND PAD

#2 TOP OF PAD SOUTH AND WEST OF ROAD

#3 TAKEN FROM EDGE OF HEAP LOOKING BACK TOWARDS BERM AND ROAD

#4 FACING SOUTHWEST ALONG THE TOP EDGE OF PAD 2

#5 VIEW OF THE TOP OF THE LARGEST WASHOUT

#6 LOOKING DOWN SLOPE IN LARGEST WASHOUT

#7 LARGEST WASHOUT

#8 SMALLER WASHOUT TO THE EAST ALSO OVER-TOPED BERM

#9 ALLUVIAL FAN LOOKING SOUTHWEST

#10 ALLUVIAL FAN FACING NORTHEAST

#11 PAD #2 LOOKING SOUTHWEST FROM MAIN ZONE HIGHWALL

#12 LOOKING SOUTH TOWARDS PAD #2 FROM HILL

#13 SHOVELING ORE AWAY TO OPEN DRAINAGE AT SMALL WASHOUT. BACKHOE BEGINNING TO CLEAN UP.

#14 INSTALLING PUMP TO CONTAIN SOLUTION DURING CLEAN UP.

#15 LOWER LEFT:

Loaders carrying ore to haul truck to be placed back on pad.

LOWER RIGHT:

Leach pad #1.

CENTER:

Hamburg Pit.

Note: Water ponded in lower left corner of pit just below clay stockpile.

CHEMTECH

ANALYTICAL LABORATORY

6100 S. STRATLER
MURRAY, UTAH 84107
PHONE: (801) 262-7299
FAX: (801) 262-7378

TO: USMX of Utah
P.O. Box 2650
St. George, UT 84770

DATE: 9-7-93

SAMPLE ID: Lab #U098341 - Monitoring Well, MW-7

DATE SAMPLED: 8-18-93 DATE SUBMITTED: 8-19-93

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED	MDL	METHOD	DATE ANALYZED
Ammonia as NH_3-N, mg/l	<.2	0.2	SM17 4500G	9-03-93
Bicarbonate as HCO_3, mg/l	369	1.0	SM17 2320B	8-19-93
Cadmium as Cd, mg/l	<.01	0.01	EPA 200.7	8-23-93
Conductivity, umhos/cm	2,880	1.0	EPA 120.1	8-19-93
Cyanide as CN (T), mg/l	0.062	0.002	ASTM D2036	8-25/8-30
Cyanide as CN (Free), mg/l	<.01	0.01	ASTM D2036	8-30-93
WAD Cyanide as CN, mg/l	0.025	0.002	ASTM D2036	8-30-93
Calcium as Ca, mg/l	437	0.1	EPA 200.7	8-24-93
Chloride as Cl, mg/l	231	0.5	EPA 325.3	8-19-93
Cobalt as Co, mg/l	0.088	0.01	EPA 200.7	8-23-93
Copper as Cu, mg/l	<.01	0.01	EPA 200.7	8-23-93
Fluoride as F, mg/l	0.61	0.1	EPA 340.2	8-23-93
Gold as Au, mg/l	0.036	0.01	EPA 200.7	8-23-93
Magnesium as Mg, mg/l	82.3	0.1	EPA 200.7	8-24-93
Nitrate as NO_3-N, mg/l	17.1	0.02	EPA 353.1	8-26-93
Potassium as K, mg/l	5.75	0.1	EPA 200.7	8-24-93
Sodium as Na, mg/l	115	0.1	EPA 200.7	8-24-93
Sulfate as SO_4, mg/l	1,120	0.5	SM17 4500D	8-20-93
Silver as Ag, mg/l	<.01	0.01	EPA 200.7	8-23-93
TDS, mg/l	2,380	5.0	EPA 160.1	8-20-93
Carbonate as CO3, mg/l	<1	1.0	SM17 2320B	8-19-93

Joel Workman

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TO: USMX of Utah
P.O. Box 2650
St. George, UT 84770

DATE: 9-7-93

SAMPLE ID: Lab #U098341 - Monitoring Well, MW-7

DATE SAMPLED: 8-18-93 DATE SUBMITTED: 8-19-93

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED	MDL	METHOD	DATE ANALYZED
Alkalinity as $CaCO_3$, mg/l	303	1.0	SM17 2320B	8-18-93
pH Units	7.73	0-14	EPA 150.1	8-19-93
Arsenic as As, mg/l	<.04	0.04	EPA 200.7	8-23-93
Barium as Ba, mg/l	0.057	0.01	EPA 200.7	8-23-93
Chromium as Cr, mg/l	0.089	0.01	EPA 200.7	8-23-93
Iron as Fe, mg/l	0.089	0.01	EPA 200.7	8-23-93
Lead as Pb, mg/l	<.02	0.02	EPA 200.7	8-23-93
Manganese as Mn, mg/l	<.01	0.01	EPA 200.7	8-23-93
Mercury as Hg, mg/l	0.00065	0.0002	EPA 245.1	8-24-93
Selenium as Se, mg/l	<.04	0.04	EPA 200.7	8-23-93
Zinc as Zn, mg/l	0.012	0.01	EPA 200.7	8-23-93
Hardness as $CaCO_3$, mg/l	1,540	1.0	EPA 130.2	8-19-93

Joel Workman

CHEMTECH

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6100 S. STRATLER
MURRAY, UTAH 84107
PHONE: (801) 262-7299
FAX: (801) 262-7378

TO: USMX of Utah
P.O. Box 2650
St. George, UT 84770

DATE: 9-7-93

SAMPLE ID: Lab #U098339 - Monitoring Well, MW-0 — DUPLICATE SAMPLE MW7 RKW

DATE SAMPLED: 8-18-93 DATE SUBMITTED: 8-19-93

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED	MDL	METHOD	DATE ANALYZED
Ammonia as NH_3-N, mg/l	<.2	0.2	SM17 4500G	8-30-93
Bicarbonate as HCO_3, mg/l	376	1.0	SM17 2320B	8-19-93
Cadmium as Cd, mg/l	<.01	0.01	EPA 200.7	8-23-93
Conductivity, umhos/cm	2,840	1.0	EPA 120.1	8-19-93
Cyanide as CN (T), mg/l	0.066	0.002	ASTM D2036	8-25/8-30
Cyanide as CN (Free), mg/l	0.012	0.01	ASTM D2036	8-30-93
WAD Cyanide as CN, mg/l	0.033	0.002	ASTM D2036	8-30-93
Calcium as Ca, mg/l	455	0.1	EPA 200.7	8-24-93
Chloride as Cl, mg/l	229	0.5	EPA 325.3	8-19-93
Cobalt as Co, mg/l	0.089	0.01	EPA 200.7	8-23-93
Copper as Cu, mg/l	<.01	0.01	EPA 200.7	8-23-93
Fluoride as F, mg/l	0.61	0.1	EPA 340.2	8-23-93
Gold as Au, mg/l	0.034	0.01	EPA 200.7	8-23-93
Magnesium as Mg, mg/l	83.9	0.1	EPA 200.7	8-24-93
Nitrate as NO_3-N, mg/l	17.1	0.02	EPA 353.1	8-26-93
Potassium as K, mg/l	6.56	0.1	EPA 200.7	8-24-93
Sodium as Na, mg/l	123	0.1	EPA 200.7	8-24-93
Sulfate as SO_4, mg/l	1,090	0.5	SM17 4500D	8-20-93
Silver as Ag, mg/l	<.01	0.01	EPA 200.7	8-23-93
TDS, mg/l	2,374	5.0	EPA 160.1	8-20-93
Carbonate as CO3, mg/l	<1	1.0	SM17 2320B	8-19-93

Joel Workman

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MURRAY, UTAH 84107
PHONE: (801) 262-7299
FAX: (801) 262-7378

TO: USMX of Utah
P.O. Box 2650
St. George, UT 84770

DATE: 9-7-93

SAMPLE ID: Lab #U098339 - Monitoring Well, MW-0

DATE SAMPLED: 8-18-93 DATE SUBMITTED: 8-19-93

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED	MDL	METHOD	DATE ANALYZED
Alkalinity as $CaCO_3$, mg/l	308	1.0	SM17 2320B	8-18-93
pH Units	7.68	0-14	EPA 150.1	8-19-93
Arsenic as As, mg/l	<.04	0.04	EPA 200.7	8-23-93
Barium as Ba, mg/l	0.045	0.01	EPA 200.7	8-23-93
Chromium as Cr, mg/l	<.01	0.01	EPA 200.7	8-23-93
Iron as Fe, mg/l	0.094	0.01	EPA 200.7	8-23-93
Lead as Pb, mg/l	<.02	0.02	EPA 200.7	8-23-93
Manganese as Mn, mg/l	<.01	0.01	EPA 200.7	8-23-93
Mercury as Hg, mg/l	0.00103	0.0002	EPA 245.1	8-24-93
Selenium as Se, mg/l	<.04	0.04	EPA 200.7	8-23-93
Zinc as Zn, mg/l	0.012	0.01	EPA 200.7	8-23-93
Hardness as $CaCO_3$, mg/l	1,510	1.0	EPA 130.2	8-19-93

Joel Workman

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6100 S. STRATLER
MURRAY, UTAH 84107
PHONE: (801) 262-7299
FAX: (801) 262-7378

DATE: 9-1-93

TO: USMX
P.O. Box 2650
St. George, Utah 84770

PROJECT: Monitor Well Samples

DATE SAMPLED: 8-11-93

DATE SUBMITTED: 8-12-93

CERTIFICATE OF ANALYSIS

SAMPLE ID: LAB#:	MW7-A U098177	MW7-B U098178	DATE ANALYZED/METHOD
PARAMETER			
Cyanide as CN-T, mg/l	0.067	0.053	8-19&25/ASTM 02036
Cyanide as CN-Free, mg/l	<.02	<.02	8-25&30/ASTM 02036
Cyanide as CN-WAD, mg/l	0.026	0.012	8-25&30/ASTM 02036

Joel Workman

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PHONE: (801) 262-7299
FAX: (801) 262-7378

DATE: 9-1-93

TO: USMX
P.O. Box 2650
St. George, Utah 84770

PROJECT: Monitor Well Samples

DATE SAMPLED: 8-11-93

DATE SUBMITTED: 8-12-93

CERTIFICATE OF ANALYSIS

SAMPLE ID:	MW7-C	Sed. Pond Sample	DATE
LAB#:	U098179	U098180	ANALYZED/METHOD
PARAMETER			
Cyanide as CN-T, mg/l	0.068	<.005	8-19&25/ASTM 02036
Cyanide as CN-Free, mg/l	<.02	<.005	8-25&30/ASTM 02036
Cyanide as CN-WAD, mg/l	0.029	<.005	8-25&30/ASTM 02036

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CHEMTECH

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TO: USMX of Utah
P.O. Box 2650
St. George, UT 84770

DATE: 8-24-93

SAMPLE ID: Lab #U097993 - Monitoring Well, MW-7

DATE SAMPLED: 8-05-93 DATE SUBMITTED: 8-06-93

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED	MDL	METHOD	DATE ANALYZED
Ammonia as NH_3-N, mg/l	<.2	0.2	SM17 4500G	8-20-93
Bicarbonate as HCO_3, mg/l	372	1.0	SM17 2320B	8-11-93
Cadmium as Cd, mg/l	<.01	0.01	EPA 200.7	8-12-93
Conductivity, umhos/cm	2,820	1.0	EPA 120.1	8-09-93
Cyanide as CN (T), mg/l	0.071	0.002	ASTM D2036	8-09-93
Cyanide as CN (Free), mg/l	<.01	0.01	ASTM D2036	8-09-93
WAD Cyanide as CN, mg/l	0.022	0.002	ASTM D2036	8-09-93
Calcium as Ca, mg/l	433	0.1	EPA 200.7	8-11-93
Chloride as Cl, mg/l	233	0.5	EPA 325.3	8-09-93
Cobalt as Co, mg/l	0.081	0.01	EPA 200.7	8-12-93
Copper as Cu, mg/l	<.01	0.01	EPA 200.7	8-12-93
Fluoride as F, mg/l	0.65	0.1	EPA 340.2	8-10-93
Gold as Au, mg/l	0.037	0.01	EPA 200.7	8-12-93
Magnesium as Mg, mg/l	80.5	0.1	EPA 200.7	8-11-93
Nitrate as NO_3-N, mg/l	18.0	0.02	EPA 353.1	8-10-93
Potassium as K, mg/l	6.64	0.1	EPA 200.7	8-11-93
Sodium as Na, mg/l	120	0.1	EPA 200.7	8-11-93
Sulfate as SO_4, mg/l	1,120	0.5	SM17 4500	8-13-93
Silver as Ag, mg/l	<.01	0.01	EPA 200.7	8-12-93
TDS, mg/l	2,536	5.0	EPA 160.1	8-10-93
Carbonate as CO3, mg/l	<1	1.0	SM17 2320B	8-11-93

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TO: USMX of Utah
P.O. Box 2650
St. George, UT 84770

DATE: 8-24-93

SAMPLE ID: Lab #U097993 - Monitoring Well, MW-7

DATE SAMPLED: 8-05-93 DATE SUBMITTED: 8-06-93

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED	MDL	METHOD	DATE ANALYZED
Alkalinity as $CaCO_3$, mg/l	305	1.0	SM17 2320B	8-11-93
pH Units	7.02	0-14	EPA 150.1	8-06-93
Arsenic as As, mg/l	<.04	0.04	EPA 200.7	8-12-93
Barium as Ba, mg/l	0.042	0.01	EPA 200.7	8-12-93
Chromium as Cr, mg/l	<.01	0.01	EPA 200.7	8-12-93
Iron as Fe, mg/l	0.072	0.01	EPA 200.7	8-12-93
Lead as Pb, mg/l	<.02	0.02	EPA 200.7	8-12-93
Manganese as Mn, mg/l	<.01	0.01	EPA 200.7	8-12-93
Mercury as Hg, mg/l	0.00049	0.0002	EPA 245.1	8-10-93
Selenium as Se, mg/l	<.04	0.04	EPA 200.7	8-12-93
Zinc as Zn, mg/l	0.043	0.01	EPA 200.7	8-12-93
Hardness as $CaCO_3$, mg/l	1,550	1.0	EPA 130.2	8-13-93

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DATE: 7-07-93

TO: USMX of Utah, Inc.
P.O. Box 2650
St. George, Utah 84770

SAMPLE ID: Lab #U096749 - Monitor Well Samples, MW-7, 6-22-93

DATE SUBMITTED: 6-23-93

DATE ANALYZED: 6-27-93

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED
Cyanide as CN (T), mg/l	0.034
Cyanide as CN (WAD), mg/l	0.024
Cyanide as CN (Free), mg/l	<.01

NOTE: Samples were submitted unpreserved.

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DATE: 7-14-93

TO: USMX of Utah, Inc.
P.O. Box 2650
St. George, Utah 84770

SAMPLE ID: Lab #U097175 - Sample MW7, 7-07-93

DATE SUBMITTED: 7-08-93

DATE ANALYZED: 7-12-93

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED
Cyanide as CN (T), mg/l	0.030
Cyanide as CN (WAD), mg/l	0.011
Cyanide as CN (Free), mg/l	<.01

NOTE: Samples analyzed by Method SM17 4500.

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TO: USMX of Utah, Inc.
P.O. Box 2650
St. George, UT 84770

DATE: 7-09-93

SAMPLE ID: Lab #U096291 - Surface Water Sample, Sediment Pond, 6-09-93

DATE SUBMITTED: 6-10-93

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED	MDL	METHOD	DATE ANALYZED
Ammonia as NH_3-N, mg/l	1.24	0.2	SM17 4500BG	7-01-93
Bicarbonate as HCO_3, mg/l	90.7	1.0	SM17 2320	6-22-93
Cadmium as Cd, mg/l	<.01	0.01	EPA 200.7	6-17-93
Conductivity, umhos/cm	1,814	1.0	EPA 120.1	6-10-93
Cyanide as CN (T), mg/l	0.017	0.005	D2036-89	6-13-93
Cyanide as CN (Free), mg/l	0.011	0.005	D2036-89	6-13/16-93
WAD Cyanide as CN, mg/l	<.005	0.005	D2036-89	6-13-93
Calcium as Ca, mg/l	237	0.1	EPA 200.7	6-16-93
Chloride as Cl, mg/l	107	0.5	EPA 325.3	6-12-93
Cobalt as Co, mg/l	0.039	0.01	EPA 200.7	6-17-93
Copper as Cu, mg/l	<.01	0.01	EPA 200.7	6-17-93
Fluoride as F, mg/l	0.86	0.1	EPA 340.2	6-21-93
Gold as Au, mg/l	<.01	0.01	EPA 200.7	6-17-93
Magnesium as Mg, mg/l	36.2	0.1	EPA 200.7	6-16-93
Nitrate as NO_3-N, mg/l	7.08	0.02	EPA 353.1	6-30/7-01-93
Potassium as K, mg/l	9.85	1.0	EPA 200.7	6-16-93
Sodium as Na, mg/l	158	0.1	EPA 200.7	6-16-93
Sulfate as SO_4, mg/l	862	0.5	EPA 375.4	6-22/6-17-93
Silver as Ag, mg/l	<.01	0.01	EPA 200.7	6-22-93
TDS, mg/l	1,463	5.0	EPA 160.1	6-15-93
Carbonate as CO_3, mg/l	<1	1.0	SM17 2320	6-22-93

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TO: USMX of Utah, Inc.
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DATE: 7-09-93

SAMPLE ID: Lab #U096291 - Surface Water Sample, Sediment Pond, 6-09-93

DATE SUBMITTED: 6-10-93

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED	MDL	METHOD	DATE ANALYZED
Alkalinity as $CaCO_3$, mg/l	74.4	1.0	SM17 2320	6-22-93
pH Units	8.33	0-14	EPA 150.1	6-10-93
Arsenic as As, mg/l	0.077	0.05	EPA 200.7	6-17-93
Barium as Ba, mg/l	0.099	0.01	EPA 200.7	6-17-93
Chromium as Cr, mg/l	<.01	0.01	EPA 200.7	6-17-93
Iron as Fe, mg/l	1.82	0.01	EPA 200.7	6-17-93
Lead as Pb, mg/l	<.02	0.02	EPA 200.7	6-17-93
Manganese as Mn, mg/l	0.058	0.01	EPA 200.7	6-17-93
Mercury as Hg, mg/l	0.00055	0.0002	EPA 245.1	6-15-93
Selenium as Se, mg/l	<.04	0.04	EPA 200.7	6-17-93
Zinc as Zn, mg/l	0.023	0.01	EPA 200.7	6-17-93
Hardness as $CaCO_3$, mg/l	723	1.0	EPA 130.2	6-18-93

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TO: USMX OF Utah
P.O. Box 2650
St. George, UT 84770

DATE: 8-6-93

SAMPLE ID: Lab #U097543 - Monitoring Well Samples, MW-7

DATE SAMPLED: 7-14-93 DATE SUBMITTED: 7-22-93

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED	MDL	METHOD	DATE ANALYZED
Ammonia as NH_3-N, mg/l	<.2	0.2	SM17 4500G	7-30/8-4
Bicarbonate as HCO_3, mg/l	374	1.0	SM17 2320B	7-23-93
Cadmium as Cd, mg/l	<.01	0.01	EPA 200.7	7-28/7-29
Conductivity, umhos/cm	2,810	1.0	EPA 120.1	7-23-93
Cyanide as CN (T), mg/l	0.061	0.002	ASTM D2036	7-26-93
Cyanide as CN (Free), mg/l	<.01	0.01	ASTM D2036	7-26/7-28
WAD Cyanide as CN, mg/l	0.026	0.002	ASTM D2036	7-28-93
Calcium as Ca, mg/l	379	0.1	EPA 200.7	7-29-93
Chloride as Cl, mg/l	227	0.5	EPA 325.3	7-22-93
Cobalt as Co, mg/l	0.073	0.01	EPA 200.7	7-28/7-29
Copper as Cu, mg/l	<.01	0.01	EPA 200.7	7-28/7-29
Fluoride as F, mg/l	0.63	0.1	EPA 340.2	7-26-93
Gold as Au, mg/l	<.01	0.01	EPA 200.7	7-28/7-29
Magnesium as Mg, mg/l	79.5	0.1	EPA 200.7	7-29-93
Nitrate as NO_3-N, mg/l	4.47	0.02	EPA 353.1	7-23-93
Potassium as K, mg/l	5.98	0.1	EPA 200.7	7-29-93
Sodium as Na, mg/l	96.0	0.1	EPA 200.7	7-29-93
Sulfate as SO_4, mg/l	1,060	0.5	SM17 4500	7-26/7-27
Silver as Ag, mg/l	<.01	0.01	EPA 200.7	7-28/7-29
TDS, mg/l	2,482	5.0	EPA 160.1	7-22-93
Carbonate as CO3, mg/l	<1	1.0	SM17 2320	7-23-93

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TO: USMX of Utah
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St. George, UT 84770

DATE: 8-6-93

SAMPLE ID: Lab #U097543 - Monitoring Well Samples, MW-7

DATE SAMPLED: 7-14-93 DATE SUBMITTED: 7-22-93

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED	MDL	METHOD	DATE ANALYZED
Alkalinity as $CaCO_3$, mg/l	306	1.0	SM17 2320	7-23-93
pH Units	7.14	0-14	EPA 150.1	7-22-93
Arsenic as As, mg/l	<.04	0.04	EPA 200.7	7-28/7-29
Barium as Ba, mg/l	0.032	0.01	EPA 200.7	7-28/7-29
Chromium as Cr, mg/l	<.01	0.01	EPA 200.7	7-28/7-29
Iron as Fe, mg/l	0.022	0.01	EPA 200.7	7-28/7-29
Lead as Pb, mg/l	<.02	0.02	EPA 200.7	7-28/7-29
Manganese as Mn, mg/l	<.01	0.01	EPA 200.7	7-28/7-29
Mercury as Hg, mg/l	<.0002	0.0002	EPA 245.1	7-23-93
Selenium as Se, mg/l	<.04	0.04	EPA 200.7	7-28/7-29
Zinc as Zn, mg/l	0.031	0.01	EPA 200.7	7-22-93
Hardness as $CaCO_3$, mg/l	1,520	1.0	EPA 130.2	7-22-93

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TO: USMX of Utah, Inc.
P.O. Box 2650
St. George, UT 84770

DATE: 7-09-93

SAMPLE ID: Lab #U096288 - Monitor Well Samples, MW-7, 6-09-93

DATE SUBMITTED: 6-10-93

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED	MDL	METHOD	DATE ANALYZED
Ammonia as NH_3-N, mg/l	1.43	0.2	SM17 4500BG	7-01-93
Bicarbonate as HCO_3, mg/l	375	1.0	SM17 2320	6-22-93
Cadmium as Cd, mg/l	<.01	0.01	EPA 200.7	6-17-93
Conductivity, umhos/cm	2,790	1.0	EPA 120.1	6-10-93
Cyanide as CN (T), mg/l	0.029	0.005	D2036-89	6-13-93
Cyanide as CN (Free), mg/l	<.01	0.01	D2036-89	6-13/16-93
WAD Cyanide as CN, mg/l	0.010	0.005	D2036-89	6-13-93
Calcium as Ca, mg/l	463	0.1	EPA 200.7	6-16-93
Chloride as Cl, mg/l	216	0.5	EPA 325.3	6-12-93
Cobalt as Co, mg/l	0.094	0.01	EPA 200.7	6-17-93
Copper as Cu, mg/l	<.01	0.01	EPA 200.7	6-17-93
Fluoride as F, mg/l	0.61	0.1	EPA 340.2	6-21-93
Gold as Au, mg/l	0.025	0.01	EPA 200.7	6-17-93
Magnesium as Mg, mg/l	81.2	0.1	EPA 200.7	6-16-93
Nitrate as NO_3-N, mg/l	19.9	0.02	EPA 353.1	6-30/7-01-93
Potassium as K, mg/l	3.74	0.1	EPA 200.7	6-16-93
Sodium as Na, mg/l	116	0.1	EPA 200.7	6-16-93
Sulfate as SO_4, mg/l	1,050	0.5	EPA 375.4	6-22/6-17-93
Silver as Ag, mg/l	<.01	0.01	EPA 200.7	6-22-93
TDS, mg/l	2,217	5.0	EPA 160.1	6-15-93
Carbonate as CO_3, mg/l	<1	1.0	SM17 2320	6-22-93

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DATE: 7-09-93

SAMPLE ID: Lab #U096288 - Monitor Well Samples, MW-7, 6-09-93

DATE SUBMITTED: 6-10-93

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED	MDL	METHOD	DATE ANALYZED
Alkalinity as $CaCO_3$, mg/l	307	1.0	SM17 2320	6-22-93
pH Units	7.32	0-14	EPA 150.1	6-10-93
Arsenic as As, mg/l	<.05	0.05	EPA 200.7	6-17-93
Barium as Ba, mg/l	0.045	0.01	EPA 200.7	6-17-93
Chromium as Cr, mg/l	<.01	0.01	EPA 200.7	6-17-93
Iron as Fe, mg/l	<.01	0.01	EPA 200.7	6-17-93
Lead as Pb, mg/l	<.02	0.02	EPA 200.7	6-17-93
Manganese as Mn, mg/l	<.01	0.01	EPA 200.7	6-17-93
Mercury as Hg, mg/l	0.00051	0.0005	EPA 245.1	6-15-93
Selenium as Se, mg/l	<.04	0.04	EPA 200.7	6-17-93
Zinc as Zn, mg/l	0.035	0.01	EPA 200.7	6-17-93
Hardness as $CaCO_3$, mg/l	1,470	1.0	EPA 130.2	6-18-93

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DATE: 7-07-93

TO: USMX of Utah, Inc.
P.O. Box 2650
St. George, Utah 84770

SAMPLE ID: Lab #U096749 - Monitor Well Samples, MW-7, 6-22-93

DATE SUBMITTED: 6-23-93

DATE ANALYZED: 6-27-93

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED
Cyanide as CN (T), mg/l	0.034
Cyanide as CN (WAD), mg/l	0.024
Cyanide as CN (Free), mg/l	<.01

NOTE: Samples were submitted unpreserved.

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DATE: 6-11-93

TO: USMX of Utah, Inc.
P.O. Box 2650
St. George, Utah 84770

SAMPLE ID: Lab #U096181 - Monitor Well Sample, MW-7, 6-03-93

DATE SUBMITTED: 6-07-93

DATE ANALYZED: 6-08-93

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED
Cyanide as CN-T, mg/l	0.055
Cyanide as CN-WAD, mg/l	0.015
Cyanide as CN-Free, mg/l	<.01

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DATE: 5-20-93

TO: USMX of Utah, Inc.
P.O. Box 2650
St. George, Utah 84770

SAMPLE ID: Lab #U093570 - Monitor Well, MW-7, 5-17-93

DATE SUBMITTED: 5-18-93

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED
Cyanide as CN (T), mg/l	0.056
Cyanide as CN (Free), mg/l	<.01
WAD Cyanide as CN, mg/l	0.014

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DATE: 6-11-93

TO: USMX of Utah, Inc.
P.O. Box 2650
St. George, Utah 84770

SAMPLE ID: Lab #U096185 - Monitor Well Sample, MW-7, 6-07-93

DATE SUBMITTED: 6-08-93

DATE ANALYZED: 6-08-93

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED
Cyanide as CN-T, mg/l	0.040
Cyanide as CN-WAD, mg/l	0.017
Cyanide as CN-Free, mg/l	<.01

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TO: USMX of Utah, Inc.
P.O. Box 2650
St. George, UT 84770

DATE: 6-04-93

SAMPLE ID: Lab #U093570 - Monitor Well, MW-7, 5-17-93

DATE SUBMITTED: 5-18-93

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED	MDL	METHOD	DATE ANALYZED
Ammonia as NH_3-N, mg/l	<.2	0.2	SM17 4500BG	5-21-93
Bicarbonate as HCO_3, mg/l	364	1.0	SM17 2320	5-21-93
Cadmium as Cd, mg/l	<.01	0.01	EPA 200.7	5-28-93
Conductivity, umhos/cm	2,630	1.0	EPA 120.1	5-19-93
Cyanide as CN (T), mg/l	0.056	0.005	D2036-89	5-19-93
Cyanide as CN (Free), mg/l	<.01	0.01	D2036-89	5-20-93
WAD Cyanide as CN, mg/l	0.014	0.005	D2036-89	5-20-93
Calcium as Ca, mg/l	421	0.1	EPA 200.7	5-20-93
Chloride as Cl, mg/l	193	0.5	EPA 325.3	5-19-93
Cobalt as Co, mg/l	0.094	0.01	EPA 200.7	5-28-93
Copper as Cu, mg/l	<.01	0.01	EPA 200.7	5-28-93
Fluoride as F, mg/l	0.64	0.1	EPA 340.2	5-18-93
Gold as Au, mg/l	0.028	0.01	EPA 200.7	5-28-93
Magnesium as Mg, mg/l	81.5	0.1	EPA 200.7	5-20-93
NO_3-N + NO_2-N, mg/l	19.2	0.02	EPA 353.1	5-19-93
Potassium as K, mg/l	5.8	0.1	EPA 200.7	5-20-93
Sodium as Na, mg/l	103	0.1	EPA 200.7	5-20-93
Sulfate as SO_4, mg/l	1,020	0.5	EPA 375.4	5-18-93
Silver as Ag, mg/l	<.01	0.01	EPA 200.7	5-28-93
TDS, mg/l	2,209	5.0	EPA 160.1	5-19-93
Carbonate as CO_3, mg/l	<1	1.0	SM17 2320	5-21-93

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TO: USMX of Utah, Inc.
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St. George, UT 84770

DATE: 6-04-93

SAMPLE ID: Lab #U093570 - Monitor Well, MW-7, 5-17-93

DATE SUBMITTED: 5-18-93

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED	MDL	METHOD	DATE ANALYZED
Alkalinity as $CaCO_3$, mg/l	298	1.0	SM17 2320	5-21-93
pH Units	7.14	0-14	EPA 150.1	5-18-93
Arsenic as As, mg/l	<.05	0.05	EPA 200.7	5-28-93
Barium as Ba, mg/l	0.057	0.01	EPA 200.7	5-28-93
Chromium as Cr, mg/l	<.01	0.01	EPA 200.7	5-28-93
Iron as Fe, mg/l	0.059	0.01	EPA 200.7	5-28-93
Lead as Pb, mg/l	<.02	0.02	EPA 200.7	5-28-93
Manganese as Mn, mg/l	<.01	0.01	EPA 200.7	5-28-93
Mercury as Hg, mg/l	0.00046	0.0005	EPA 245.1	5-21-93
Selenium as Se, mg/l	<.04	0.04	EPA 200.7	5-28-93
Zinc as Zn, mg/l	0.018	0.01	EPA 200.7	5-28-93
Hardness as $CaCO_3$, mg/l	1,430	1.0	EPA 130.2	5-19-93
Nitrite as NO_2-N, mg/l	0.006	0.005	EPA 354.1	5-19-93

Joel Workman

CHEMTECH

ANALYTICAL LABORATORY

6100 S. STRATLER
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PHONE: (801) 262-7299
FAX: (801) 262-7378

TO: USMX of Utah, Inc.
P.O. Box 2650
St. George, Utah 84770

DATE: 6-24-93

SAMPLE ID: Lab #U095987 - Monitor Well Samples, MW7, 5-28-93

DATE SUBMITTED: 6-02-93

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED	MDL	METHOD	DATE ANALYZED
Ammonia as NH_3-N, mg/l	<.2	0.2	SM17 4500BG	6-07-93
Bicarbonate as HCO_3, mg/l	314	1.0	SM17 2320	6-08-93
Cadmium as Cd, mg/l	<.01	0.01	EPA 200.7	6-07-93
Conductivity, umhos/cm	2,670	1.0	EPA 120.1	6-02-93
Cyanide as CN (T), mg/l	0.057	0.002	D2036-89	6-04-93
Cyanide as CN (Free), mg/l	<.02	0.02	D2036-89	6-04-93
WAD Cyanide as CN, mg/l	<.05	0.05	D2036-89	6-04-93
Calcium as Ca, mg/l	434	0.1	EPA 200.7	6-07-93
Chloride as Cl, mg/l	210	0.5	EPA 325.3	6-04-93
Cobalt as Co, mg/l	0.102	0.01	EPA 200.7	6-07-93
Copper as Cu, mg/l	<.01	0.01	EPA 200.7	6-07-93
Fluoride as F, mg/l	0.65	0.1	EPA 340.2	6-04-93
Gold as Au, mg/l	0.033	0.01	EPA 200.7	6-07-93
Magnesium as Mg, mg/l	82.9	0.1	EPA 200.7	6-07-93
NO_3-N + NO_2-N, mg/l	9.32	0.03	EPA 353.1	6-10-93
Potassium as K, mg/l	6.03	0.1	EPA 200.7	6-07-93
Sodium as Na, mg/l	108	0.1	EPA 200.7	6-07-93
Sulfate as SO_4, mg/l	1,040	0.5	EPA 375.4	6-11-93
Silver as Ag, mg/l	<.01	0.01	EPA 200.7	6-07-93
TDS, mg/l	2,290	5.0	EPA 160.1	6-05-93
Carbonate as CO_3, mg/l	<1	1.0	SM17 2320	6-08-93

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TO: Tenneco Minerals Company
P.O. Box 2650
St. George, UT 84770

DATE: 6-24-93

SAMPLE ID: Lab #U095987 - Monitor Well Samples, MW7, 5-28-93

DATE SUBMITTED: 6-02-93

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED	MDL	METHOD	DATE ANALYZED
Alkalinity as $CaCO_3$, mg/l	257	1.0	SM17 2320	6-08-93
pH Units	7.18	0-14	EPA 150.1	6-02-93
Arsenic as As, mg/l	<.05	0.05	EPA 200.7	6-09/10
Barium as Ba, mg/l	0.044	0.01	EPA 200.7	6-07-93
Chromium as Cr, mg/l	<.01	0.01	EPA 200.7	6-07-93
Iron as Fe, mg/l	0.044	0.01	EPA 200.7	6-07-93
Lead as Pb, mg/l	<.02	0.02	EPA 200.7	6-07-93
Manganese as Mn, mg/l	<.01	0.01	EPA 200.7	6-07-93
Mercury as Hg, mg/l	0.00029	0.0002	EPA 245.1	6-03-93
Selenium as Se, mg/l	<.04	0.04	EPA 200.7	6-07-93
Zinc as Zn, mg/l	0.014	0.01	EPA 200.7	6-07-93
Hardness as $CaCO_3$, mg/l	1,450	1.0	EPA 130.2	6-17-93
*Nitrite as NO_2-N, mg/l	<.005	0.005	EPA 354.1	6-03-93

*Submitted past holding time.

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TO: USMX of Utah, Inc.
P.O. Box 2650
St. George, Utah 84770

DATE: 6-24-93

DUPLICATE SAMPLE MW7

SAMPLE ID: Lab #U095982 - Monitor Well Samples, ~~MW0,~~ 5-28-93

DATE SUBMITTED: 6-02-93

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED	MDL	METHOD	DATE ANALYZED
Ammonia as NH_3-N, mg/l	<.2	0.2	SM17 4500BG	6-07-93
Bicarbonate as HCO_3, mg/l	362	1.0	SM17 2320	6-08-93
Cadmium as Cd, mg/l	<.01	0.01	EPA 200.7	6-07-93
Conductivity, umhos/cm	2,660	1.0	EPA 120.1	6-02-93
Cyanide as CN (T), mg/l	0.027	0.002	D2036-89	6-04-93
Cyanide as CN (Free), mg/l	<.01	0.01	D2036-89	6-04-93
WAD Cyanide as CN, mg/l	0.014	0.002	D2036-89	6-04-93
Calcium as Ca, mg/l	424	0.1	EPA 200.7	6-07-93
Chloride as Cl, mg/l	204	0.5	EPA 325.3	6-04-93
Cobalt as Co, mg/l	0.099	0.01	EPA 200.7	6-07-93
Copper as Cu, mg/l	<.01	0.01	EPA 200.7	6-07-93
Fluoride as F, mg/l	0.61	0.1	EPA 340.2	6-04-93
Gold as Au, mg/l	0.033	0.01	EPA 200.7	6-07-93
Magnesium as Mg, mg/l	81.4	0.1	EPA 200.7	6-07-93
NO_3-N + NO_2-N, mg/l	6.48	0.03	EPA 353.1	6-10-93
Potassium as K, mg/l	6.56	0.1	EPA 200.7	6-07-93
Sodium as Na, mg/l	114	0.1	EPA 200.7	6-07-93
Sulfate as SO_4, mg/l	1,010	0.5	EPA 375.4	6-11-93
Silver as Ag, mg/l	<.01	0.01	EPA 200.7	6-07-93
TDS, mg/l	2,243	5.0	EPA 160.1	6-05-93
Carbonate as CO_3, mg/l	<1	1.0	SM17 2320	6-08-93

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TO: Tenneco Minerals Company
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St. George, UT 84770

DATE: 6-24-93

SAMPLE ID: Lab #U095982 - Monitor Well Samples, MW0, 5-28-93

DATE SUBMITTED: 6-02-93

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED	MDL	METHOD	DATE ANALYZED
Alkalinity as $CaCO_3$, mg/l	298	1.0	SM17 2320	6-08-93
pH Units	7.19	0-14	EPA 150.1	6-02-93
Arsenic as As, mg/l	<.05	0.05	EPA 200.7	6-09/10
Barium as Ba, mg/l	0.045	0.01	EPA 200.7	6-07-93
Chromium as Cr, mg/l	<.01	0.01	EPA 200.7	6-07-93
Iron as Fe, mg/l	0.052	0.01	EPA 200.7	6-07-93
Lead as Pb, mg/l	<.02	0.02	EPA 200.7	6-07-93
Manganese as Mn, mg/l	<.01	0.01	EPA 200.7	6-07-93
Mercury as Hg, mg/l	0.00040	0.0002	EPA 245.1	6-03-93
Selenium as Se, mg/l	<.04	0.04	EPA 200.7	6-07-93
Zinc as Zn, mg/l	0.015	0.01	EPA 200.7	6-07-93
Hardness as $CaCO_3$, mg/l	1,440	1.0	EPA 130.2	6-17-93
*Nitrite as NO_2-N, mg/l	<.005	0.005	EPA 354.1	6-03-93

*Submitted past holding time.

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TO: USMX of Utah, Inc.
P.O. Box 2650
St. George, UT 84770

DATE: 5-06-93

SAMPLE ID: Lab #U092731 - MW-7, 4-22-93

DATE SUBMITTED: 4-23-93

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED	MDL	METHOD	DATE ANALYZED
Ammonia as NH_3-N, mg/l	0.239	0.2	SM17 4500BG	4-28-93
Bicarbonate as HCO_3, mg/l	346	1.0	SM17 2320	4-27-93
Cadmium as Cd, mg/l	<.01	0.01	EPA 200.7	4-30-93
Conductivity, umhos/cm	2,560	1.0	EPA 120.1	4-27-93
Cyanide as CN (T), mg/l	0.079	0.005	D2036-89	4-28-93
Cyanide as CN (Free), mg/l	0.011	0.005	D2036-89	4-30-93
WAD Cyanide as CN, mg/l	0.037	0.005	D2036-89	4-30-93
Calcium as Ca, mg/l	363	0.1	EPA 200.7	4-23-93
Chloride as Cl, mg/l	176	0.5	EPA 325.3	4-24-93
Cobalt as Co, mg/l	0.102	0.01	EPA 200.7	4-30-93
Copper as Cu, mg/l	<.01	0.01	EPA 200.7	4-30-93
Fluoride as F, mg/l	0.668	0.1	EPA 340.2	4-24-93
Gold as Au, mg/l	0.037	0.01	EPA 200.7	4-30-93
Magnesium as Mg, mg/l	71.9	0.1	EPA 200.7	4-23-93
NO_3-N + NO_2-N, mg/l	18.8	0.02	EPA 353.1	4-23-93
Potassium as K, mg/l	5.60	0.1	EPA 200.7	4-23-93
Sodium as Na, mg/l	94.3	0.1	EPA 200.7	4-23-93
Sulfate as SO_4, mg/l	976	0.5	EPA 375.4	4-27-93
Silver as Ag, mg/l	<.01	0.01	EPA 200.7	4-30-93
TDS, mg/l	2,170	5.0	EPA 160.1	4-27-93
Carbonate as CO3, mg/l	<1.0	1.0	SM17 2320	4-27-93

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TO: USMX of Utah, Inc.
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DATE: 5-06-93

SAMPLE ID: Lab #U092731 - MW-7, 4-22-93

DATE SUBMITTED: 4-23-93

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED	MDL	METHOD	DATE ANALYZED
Alkalinity as $CaCO_3$, mg/l	284	1.0	SM17 2320	4-27-93
pH Units	7.07	0-14	EPA 150.1	4-23-93
Arsenic as As, mg/l	<.05	0.05	EPA 200.7	4-30-93
Barium as Ba, mg/l	0.041	0.01	EPA 200.7	4-30-93
Chromium as Cr, mg/l	<.01	0.01	EPA 200.7	4-30-93
Iron as Fe, mg/l	0.064	0.01	EPA 200.7	4-30-93
Lead as Pb, mg/l	<.02	0.02	EPA 200.7	4-30-93
Manganese as Mn, mg/l	<.01	0.01	EPA 200.7	4-30-93
Mercury as Hg, mg/l	0.00026	0.0005	EPA 245.1	4-29-93
Selenium as Se, mg/l	<.05	0.05	EPA 200.7	4-30-93
Zinc as Zn, mg/l	0.011	0.01	EPA 200.7	4-30-93
Hardness as $CaCO_3$, mg/l	1,360	1.0	EPA 130.2	4-24-93
*Nitrite as NO_2-N, mg/l	0.006	0.005	EPA 354.1	3-23-93

*Run past holding time.

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TO: USMX of Utah, Inc.
P.O. Box 2650
St. George, UT 84770

DATE: 4-06-93

SAMPLE ID: Lab #U091339 - Monitor Well, MW-7 @ 930 a.m., 3-17-93

DATE SUBMITTED: 3-18-93

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED	MDL	METHOD	DATE ANALYZED
Alkalinity as $CaCO_3$, mg/l	266	1.0	SM17 2320	3-19-93
pH Units	7.13	0-14	EPA 150.1	3-18-93
Arsenic as As, mg/l	<.05	0.05	EPA 200.7	3-24-93
Barium as Ba, mg/l	0.043	0.01	EPA 200.7	3-24-93
Chromium as Cr, mg/l	<.01	0.01	EPA 200.7	3-24-93
Iron as Fe, mg/l	0.052	0.01	EPA 200.7	3-24-93
Lead as Pb, mg/l	<.02	0.02	EPA 200.7	3-24-93
Manganese as Mn, mg/l	<.01	0.01	EPA 200.7	3-24-93
Mercury as Hg, mg/l	0.00045	0.0002	EPA 245.1	3-23-93
Selenium as Se, mg/l	<.05	0.05	EPA 200.7	3-24-93
Zinc as Zn, mg/l	0.016	0.01	EPA 200.7	3-24-93
Hardness as $CaCO_3$, mg/l	1,340	1.0	EPA 130.2	3-19-93
Nitrite as NO_2-N, mg/l	0.010	0.005	EPA 354.1	3-19-93

NOTE: Nitrite was submitted past holding time.

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TO: USMX of Utah, Inc.
P.O. Box 2650
St. George, UT 84770

DATE: 4-06-93

SAMPLE ID: Lab #U091339 - Monitor Well, MW-7 @ 930 a.m., 3-17-93

DATE SUBMITTED: 3-18-93

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED	MDL	METHOD	DATE ANALYZED
Ammonia as NH_3-N, mg/l	0.235	0.2	SM17 4500BG	3-22-93
Bicarbonate as HCO_3, mg/l	324	1.0	SM17 2320	3-19-93
Cadmium as Cd, mg/l	<.01	0.01	EPA 200.7	3-24-93
Conductivity, umhos/cm	2,500	1.0	EPA 120.1	3-18-93
Cyanide as CN (T), mg/l	0.045	0.002	D2036-89	3-23-93
Cyanide as CN (Free), mg/l	0.014	0.002	D2036-89	3-23-93
WAD Cyanide as CN, mg/l	0.046	0.002	D2036-89	3-23/3-30
Calcium as Ca, mg/l	400	0.1	EPA 200.7	3-19-93
Chloride as Cl, mg/l	1460	0.5	EPA 325.3	3-22-93
Cobalt as Co, mg/l	0.164	0.01	EPA 200.7	3-24-93
Copper as Cu, mg/l	<.01	0.01	EPA 200.7	3-24-93
Fluoride as F, mg/l	0.67	0.1	EPA 340.2	3-18-93
Gold as Au, mg/l	0.04	0.01	EPA 200.7	3-24-93
Magnesium as Mg, mg/l	78.5	0.1	EPA 200.7	3-19-93
NO_3-N + NO_2-N, mg/l	28.7	0.02	EPA 353.1	4-05-93
Potassium as K, mg/l	6.02	0.1	EPA 200.7	3-19-93
Sodium as Na, mg/l	96.3	0.1	EPA 200.7	3-19-93
Sulfate as SO_4, mg/l	915	0.5	EPA 375.4	3-22/4-02
Silver as Ag, mg/l	<.01	0.01	EPA 200.7	3-24-93
TDS, mg/l	2,098	5.0	EPA 160.1	3-17-93
Carbonate as CO3, mg/l	0	1.0	SM17 2320	3-19-93

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TO: USMX of Utah, Inc.
P.O. Box 2650
St. George, UT 84770

DATE: 4-09-93

SAMPLE ID: Lab #U091135 - Monitoring Well Samples, ~~MW-0~~ MW4 DUPLICATE @ 2:35am, 3-10-93

DATE SUBMITTED: 3-12-93

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED	MDL	METHOD	DATE ANALYZED
Ammonia as NH_3-N, mg/l	0.28	0.2	SM17 4500BG	3-15-93
Bicarbonate as HCO_3, mg/l	326	1.0	SM17 2320	3-15-93
Cadmium as Cd, mg/l	<.01	0.01	EPA 200.7	3-22-93
Conductivity, umhos/cm	2,410	1.0	EPA 120.1	3-12-93
Cyanide as CN (T), mg/l	0.084	0.002	D2036-89	3-17-93
Cyanide as CN (Free), mg/l	0.031	0.002	D2036-89	3-19/3-20
WAD Cyanide as CN, mg/l	0.086	0.002	D2036-89	3-17/19/25
Calcium as Ca, mg/l	361	0.1	EPA 200.7	3-12-93
Chloride as Cl, mg/l	138	0.5	EPA 325.3	3-12-93
Cobalt as Co, mg/l	0.182	0.01	EPA 200.7	3-22-93
Copper as Cu, mg/l	<.01	0.01	EPA 200.7	3-22-93
Fluoride as F, mg/l	0.66	0.1	EPA 340.2	3-15-93
Gold as Au, mg/l	0.037	0.01	EPA 200.7	3-22-93
Magnesium as Mg, mg/l	68.9	0.1	EPA 200.7	3-12-93
NO_3-N + NO_2-N, mg/l	28.3	0.02	EPA 353.1	4-05-93
Potassium as K, mg/l	7.02	0.1	EPA 200.7	3-12-93
Sodium as Na, mg/l	76.9	0.1	EPA 200.7	3-12-93
Sulfate as SO_4, mg/l	894	0.5	EPA 375.4	3-16/3-17
Silver as Ag, mg/l	<.01	0.01	EPA 200.7	3-22-93
TDS, mg/l	2,008	5.0	EPA 160.1	3-15-93
Carbonate as CO3, mg/l	<1	1.0	SM17 2320	3-15-93

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TO: USMX of Utah, Inc.
P.O. Box 2650
St. George, UT 84770

DATE: 4-09-93

SAMPLE ID: Lab #U091135 - Monitoring Well Samples, MW-0 @ 2:35am, 3-10-93

DATE SUBMITTED: 3-12-93

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED	MDL	METHOD	DATE ANALYZED
Alkalinity as $CaCO_3$, mg/l	267	1.0	SM17 2320	3-15-93
pH Units	7.09	0-14	EPA 150.1	3-12-93
Arsenic as As, mg/l	<.05	0.05	EPA 200.7	3-22-93
Barium as Ba, mg/l	0.042	0.01	EPA 200.7	3-22-93
Chromium as Cr, mg/l	<.01	0.01	EPA 200.7	3-22-93
Iron as Fe, mg/l	0.060	0.01	EPA 200.7	3-22-93
Lead as Pb, mg/l	<.02	0.02	EPA 200.7	3-22-93
Manganese as Mn, mg/l	<.01	0.01	EPA 200.7	3-22-93
Mercury as Hg, mg/l	0.00057	0.0005	EPA 245.1	3-23-93
Selenium as Se, mg/l	<.05	0.05	EPA 200.7	3-22-93
Zinc as Zn, mg/l	0.016	0.01	EPA 200.7	3-22-93
Hardness as $CaCO_3$, mg/l	1,300	1.0	EPA 130.2	3-13-93
*Nitrite as NO_2-N, mg/l	0.018	0.005	EPA 354.1	3-12-93

*Past holding time.

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TO: USMX of Utah, Inc.
P.O. Box 2650
St. George, UT 84770

DATE: 4-09-93

SAMPLE ID: Lab #U091138 - Monitoring Well Samples, MW-7 @ 2:33pm, 3-10-93

DATE SUBMITTED: 3-12-93

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED	MDL	METHOD	DATE ANALYZED
Ammonia as NH_3-N, mg/l	<.2	0.2	SM17 4500BG	3-15-93
Bicarbonate as HCO_3, mg/l	326	1.0	SM17 2320	3-15-93
Cadmium as Cd, mg/l	<.01	0.01	EPA 200.7	3-22-93
Conductivity, umhos/cm	2,410	1.0	EPA 120.1	3-12-93
Cyanide as CN (T), mg/l	0.062	0.002	D2036-89	3-17-93
Cyanide as CN (Free), mg/l	0.024	0.002	D2036-89	3-19/3-20
WAD Cyanide as CN, mg/l	0.065	0.002	D2036-89	3-17/19/25
Calcium as Ca, mg/l	352	0.1	EPA 200.7	3-12-93
Chloride as Cl, mg/l	141	0.5	EPA 325.3	3-12-93
Cobalt as Co, mg/l	0.174	0.01	EPA 200.7	3-22-93
Copper as Cu, mg/l	<.01	0.01	EPA 200.7	3-22-93
Fluoride as F, mg/l	0.65	0.1	EPA 340.2	3-15-93
Gold as Au, mg/l	0.045	0.01	EPA 200.7	3-22-93
Magnesium as Mg, mg/l	68.9	0.1	EPA 200.7	3-12-93
NO_3-N + NO_2-N, mg/l	26.5	0.02	EPA 353.1	4-05-93
Potassium as K, mg/l	6.51	0.1	EPA 200.7	3-12-93
Sodium as Na, mg/l	76.9	0.1	EPA 200.7	3-12-93
Sulfate as SO_4, mg/l	886	0.5	EPA 375.4	3-16/3-17
Silver as Ag, mg/l	<.01	0.01	EPA 200.7	3-22-93
TDS, mg/l	2,022	5.0	EPA 160.1	3-15-93
Carbonate as CO3, mg/l	<1	1.0	SM17 2320	3-15-93

Joel Workman

CHEMTECH

ANALYTICAL LABORATORY

6100 S. STRATLER
MURRAY, UTAH 84107
PHONE: (801) 262-7299
FAX: (801) 262-7378

TO: USMX of Utah, Inc.
P.O. Box 2650
St. George, UT 84770

DATE: 4-09-93

SAMPLE ID: Lab #U091138 - Monitoring Well Samples, MW-7 @ 2:33pm, 3-10-93

DATE SUBMITTED: 3-12-93

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED	MDL	METHOD	DATE ANALYZED
Alkalinity as $CaCO_3$, mg/l	267	1.0	SM17 2320	3-15-93
pH Units	7.08	0-14	EPA 150.1	3-12-93
Arsenic as As, mg/l	<.05	0.05	EPA 200.7	3-22-93
Barium as Ba, mg/l	0.039	0.01	EPA 200.7	3-22-93
Chromium as Cr, mg/l	<.01	0.01	EPA 200.7	3-22-93
Iron as Fe, mg/l	0.074	0.01	EPA 200.7	3-22-93
Lead as Pb, mg/l	<.02	0.02	EPA 200.7	3-22-93
Manganese as Mn, mg/l	<.01	0.01	EPA 200.7	3-22-93
Mercury as Hg, mg/l	0.00050	0.0005	EPA 245.1	3-23-93
Selenium as Se, mg/l	<.05	0.05	EPA 200.7	3-22-93
Zinc as Zn, mg/l	0.028	0.01	EPA 200.7	3-22-93
Hardness as $CaCO_3$, mg/l	1,290	1.0	EPA 130.2	3-13-93
*Nitrite as NO_2-N, mg/l	0.021	0.005	EPA 354.1	3-12-93

*Past holding time.

Joel Workman

CHEMTECH

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MURRAY, UTAH 84107
PHONE: (801) 262-7299
FAX: (801) 262-7378

TO: Tenneco Minerals Company
P.O. Box 2650
St. George, UT 84770

DATE: 4-01-93

SAMPLE ID: Lab #U090820 - Surface Water Samples, MW-7 @ 1730, 2-25-93

DATE SUBMITTED: 3-02-93

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED	MDL	METHOD	DATE ANALYZED
Ammonia as NH_3-N, mg/l	<.2	0.2	SM17 4500BG	3-11-93
Bicarbonate as HCO_3, mg/l	354	1.0	SM17 2320	3-09-93
Cadmium as Cd, mg/l	<.01	0.01	EPA 200.7	3-11-93
Conductivity, umhos/cm	2,150	1.0	EPA 120.1	3-04-93
Cyanide as CN (T), mg/l	<.005	0.005	D2036-89	3-09-93
Cyanide as CN (Free), mg/l	<.005	0.005	D2036-89	3-11-93
WAD Cyanide as CN, mg/l	<.005	0.005	D2036-89	3-11-93
Calcium as Ca, mg/l	340	0.1	EPA 200.7	3-05-93
Chloride as Cl, mg/l	109	0.5	EPA 325.3	3-04-93
Cobalt as Co, mg/l	0.081	0.01	EPA 200.7	3-11-93
Copper as Cu, mg/l	<.01	0.01	EPA 200.7	3-11-93
Fluoride as F, mg/l	0.62	0.1	EPA 340.2	3-04-93
Gold as Au, mg/l	0.027	0.01	EPA 200.7	3-11-93
Magnesium as Mg, mg/l	69.1	0.1	EPA 200.7	3-05-93
NO_3-N + NO_2-N, mg/l	12.8	0.02	EPA 353.1	3-24-93
Potassium as K, mg/l	5.1	0.1	EPA 200.7	3-05-93
Sodium as Na, mg/l	80.8	0.1	EPA 200.7	3-05-93
Sulfate as SO_4, mg/l	780	0.5	EPA 375.4	3-10/3-11
Silver as Ag, mg/l	<.01	0.01	EPA 200.7	3-11-93
TDS, mg/l	1,702	5.0	EPA 160.1	3-04/3-08
Carbonate as CO_3, mg/l	<1.0	1.0	SM17 2320	3-09-93

Joel Workman

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FAX: (801) 262-7378

TO: Tenneco Minerals Company
P.O. Box 2650
St. George, UT 84770

DATE: 4-01-93

SAMPLE ID: Lab #U090820 - Surface Water Samples, MW-7 @ 1730, 2-25-93

DATE SUBMITTED: 3-02-93

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED	MDL	METHOD	DATE ANALYZED
Alkalinity as $CaCO_3$, mg/l	290	1.0	SM17 2320	3-09-93
pH Units	7.05	0-14	EPA 150.1	3-02-93
Arsenic as As, mg/l	0.017	0.01	EPA 200.7	3-11-93
Barium as Ba, mg/l	0.039	0.01	EPA 200.7	3-11-93
Chromium as Cr, mg/l	<.01	0.01	EPA 200.7	3-11-93
Iron as Fe, mg/l	0.061	0.01	EPA 200.7	3-11-93
Lead as Pb, mg/l	<.01	0.01	EPA 200.7	3-11-93
Manganese as Mn, mg/l	<.01	0.01	EPA 200.7	3-11-93
Mercury as Hg, mg/l	<.0002	0.0002	EPA 245.1	3-11-93
Selenium as Se, mg/l	0.017	0.01	EPA 200.7	3-11-93
Zinc as Zn, mg/l	0.016	0.01	EPA 200.7	3-11-93
Hardness as $CaCO_3$, mg/l	1,180	1.0	EPA 130.2	3-06-93
*Nitrite as NO_2-N, mg/l	0.008	0.005	EPA 354.1	3-03-93

*Past Holding Time

Joel Workman

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TO: Tenneco Minerals Company
P.O. Box 2650
St. George, UT 84770

DATE: 12-09-91

MW 7 CHECK SAMPLE RKW

SAMPLE ID: Lab #U071372 - Monitor Well Samples, MW0, 11-24-91

DATE SUBMITTED: 11-26-91

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED
Ammonia as NH_3-N, mg/l	<.2
Bicarbonate as HCO_3, mg/l	337
Cadmium as Cd, mg/l	<.01
Conductivity, umhos/cm	1,799
Cyanide as CN (T), mg/l	0.012
Cyanide as CN (Free), mg/l	<.005
WAD Cyanide as CN, mg/l	<.005
Calcium as Ca, mg/l	296
Chloride as Cl, mg/l	127
Cobalt as Co, mg/l	<.01
Copper as Cu, mg/l	<.01
Fluoride as F, mg/l	0.82
Gold as Au, mg/l	<.01
Magnesium as Mg, mg/l	49
Nitrate as NO_3-N, mg/l	3.14
Potassium as K, mg/l	5.1
Sodium as Na, mg/l	60.8
Sulfate as SO_4, mg/l	515
Silver as Ag, mg/l	<.01
TDS, mg/l	1,400
Carbonate as CO3, mg/l	0

Rex Henderson

CHEMTECH
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TO: Tenneco Minerals Company
P.O. Box 2650
St. George, UT 84770

DATE: 12-09-91

SAMPLE ID: Lab #U071372 - Monitor Well Samples, MW0, 11-24-91

DATE SUBMITTED: 11-26-91

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED
Alkalinity as $CaCO_3$, mg/l	276
pH Units	8.07
Arsenic as As, mg/l	0.026
Barium as Ba, mg/l	0.036
Chromium as Cr, mg/l	<.01
Iron as Fe, mg/l	0.070
Lead as Pb, mg/l	<.01
Manganese as Mn, mg/l	<.01
Mercury as Hg, mg/l	<.0005
Selenium as Se, mg/l	0.015
Zinc as Zn, mg/l	<.01
Hardness as $CaCO_3$, mg/l	893

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TO: Tenneco Minerals Company
P.O. Box 2650
St. George, UT 84770

DATE: 1-03-92

MW 7 CHECK SAMPLE
↑ RKW

SAMPLE ID: Lab #U072236 - Goldstrike Monitor Wells, MWO, 12-17-91

DATE SUBMITTED: 12-19-91

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED
Ammonia as NH_3-N, mg/l	<.2
Bicarbonate as HCO_3, mg/l	362
Cadmium as Cd, mg/l	<.01
Conductivity, umhos/cm	1,732
Cyanide as CN (T), mg/l	<.005
Cyanide as CN (Free), mg/l	<.005
WAD Cyanide as CN, mg/l	<.005
Calcium as Ca, mg/l	320
Chloride as Cl, mg/l	122
Cobalt as Co, mg/l	<.01
Copper as Cu, mg/l	<.01
Fluoride as F, mg/l	0.91
Gold as Au, mg/l	<.01
Magnesium as Mg, mg/l	50.5
Nitrate as NO_3-N, mg/l	6.68
Potassium as K, mg/l	4.4
Sodium as Na, mg/l	68.3
Sulfate as SO_4, mg/l	603
Silver as Ag, mg/l	<.01
TDS, mg/l	1,408
Carbonate as CO3, mg/l	0

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St. George, UT 84770

DATE: 1-03-92

SAMPLE ID: Lab #U072236 - Goldstrike Monitor Wells, MWO, 12-17-91

DATE SUBMITTED: 12-19-91

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED
Alkalinity as $CaCO_3$, mg/l	298
pH Units	8.12
Arsenic as As, mg/l	0.023
Barium as Ba, mg/l	0.020
Chromium as Cr, mg/l	<.01
Iron as Fe, mg/l	0.045
Lead as Pb, mg/l	<.01
Manganese as Mn, mg/l	<.01
Mercury as Hg, mg/l	<.0005
Selenium as Se, mg/l	0.009
Zinc as Zn, mg/l	<.01
Hardness as $CaCO_3$, mg/l	923

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TO: Tenneco Minerals Company
P.O. Box 2650
St. George, UT 84770

DATE: 2-10-92

DUPLICATE MW-7

SAMPLE ID: Lab #U073401 - Monitor Well Samples, MW-0, Samp. 1-24-92

DATE SUBMITTED: 1-28-92

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED
Ammonia as NH_3-N, mg/l	<.2
Bicarbonate as HCO_3, mg/l	307
Cadmium as Cd, mg/l	<.01
Conductivity, umhos/cm	1,790
Cyanide as CN (T), mg/l	<.005
Cyanide as CN (Free), mg/l	<.005
WAD Cyanide as CN, mg/l	<.005
Calcium as Ca, mg/l	325
Chloride as Cl, mg/l	123
Cobalt as Co, mg/l	<.01
Copper as Cu, mg/l	<.01
Fluoride as F, mg/l	0.94
Gold as Au, mg/l	<.01
Magnesium as Mg, mg/l	51.1
Nitrate as NO_3-N, mg/l	7.66
Potassium as K, mg/l	5.7
Sodium as Na, mg/l	67.0
Sulfate as SO_4, mg/l	594
Silver as Ag, mg/l	<.01
TDS, mg/l	1,398
Carbonate as CO3, mg/l	0

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TO: Tenneco Minerals Company
P.O. Box 2650
St. George, UT 84770

DATE: 2-10-92

SAMPLE ID: Lab #U073401 - Monitor Well Samples, MW-0, Samp. 1-24-92

DATE SUBMITTED: 1-28-92

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED
Alkalinity as $CaCO_3$, mg/l	252
pH Units	7.73
Arsenic as As, mg/l	0.025
Barium as Ba, mg/l	0.027
Chromium as Cr, mg/l	<.01
Iron as Fe, mg/l	0.030
Lead as Pb, mg/l	<.01
Manganese as Mn, mg/l	<.01
Mercury as Hg, mg/l	0.00067
Selenium as Se, mg/l	0.009
Zinc as Zn, mg/l	<.01
Hardness as $CaCO_3$, mg/l	940

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TO: Tenneco Minerals Company
P.O. Box 2650
St. George, UT 84770

DATE: 3-17-92

Duplicate MW4

SAMPLE ID: Lab #U074785 - Monitor Well Samples, MWO, Samp. 2-25-92

DATE SUBMITTED: 2-28-92

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED
Ammonia as NH_3-N, mg/l	0.359
Bicarbonate as HCO_3, mg/l	316
Cadmium as Cd, mg/l	<.01
Conductivity, umhos/cm	1,770
Cyanide as CN (T), mg/l	<.005
Cyanide as CN (Free), mg/l	<.005
WAD Cyanide as CN, mg/l	<.005
Calcium as Ca, mg/l	373
Chloride as Cl, mg/l	96.4
Cobalt as Co, mg/l	<.01
Copper as Cu, mg/l	<.01
Fluoride as F, mg/l	0.92
Gold as Au, mg/l	<.01
Magnesium as Mg, mg/l	45.1
Nitrate as NO_3-N, mg/l	9.02
Potassium as K, mg/l	5.7
Sodium as Na, mg/l	71
Sulfate as SO_4, mg/l	639
Silver as Ag, mg/l	<.01
TDS, mg/l	1,492
Carbonate as CO3, mg/l	0

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CHEMTECH
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FAX: (801) 262-7378

TO: Tenneco Minerals Company
P.O. Box 2650
St. George, UT 84770

DATE: 3-17-92

SAMPLE ID: Lab #U074785 - Monitor Well Samples, MWO, Samp. 2-25-92

DATE SUBMITTED: 2-28-92

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED
Alkalinity as $CaCO_3$, mg/l	259
pH Units	8.07
Arsenic as As, mg/l	<.05
Barium as Ba, mg/l	0.026
Chromium as Cr, mg/l	<.01
Iron as Fe, mg/l	0.090
Lead as Pb, mg/l	<.01
Manganese as Mn, mg/l	<.01
Mercury as Hg, mg/l	<.0005
Selenium as Se, mg/l	0.007
Zinc as Zn, mg/l	0.011
Hardness as $CaCO_3$ (Diss), mg/l	959

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FAX: (801) 262-7378

TO: Tenneco Minerals Company
P.O. Box 2650
St. George, UT 84770

DATE: 10-07-92

SAMPLE ID: Lab #U081912 - September - Monitor Well Samples. MWO
Sampled 9-16-92 DUPLICATE OF MW #7

DATE SUBMITTED: 9-18-92

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED	MDL	METHOD	DATE ANALYZED
Ammonia as NH_3-N, mg/l	0.56	0.2	EPA 350.3	9-21-92
Bicarbonate as HCO_3, mg/l	342	1.0	EPA 310.1	9-18-92
Cadmium as Cd, mg/l	<.01	0.01	EPA 200.7	10-06-92
Conductivity, umhos/cm	1.984	1.0	EPA 120.1	9-18-92
Cyanide as CN (T), mg/l	<.005	0.005	D2036-87	9-23-92
Cyanide as CN (Free), mg/l	<.005	0.005	D2036-87	9-23-92
WAD Cyanide as CN, mg/l	<.005	0.005	D2036-87	9-23-92
Calcium as Ca, mg/l	350	0.1	EPA 215.1	9-28-92
Chloride as Cl, mg/l	119	0.5	EPA 325.3	9-18-92
Cobalt as Co, mg/l	<.01	0.01	EPA 200.7	10-06-92
Copper as Cu, mg/l	<.01	0.01	EPA 200.7	10-06-92
Fluoride as F, mg/l	0.62	0.1	EPA 340.1	9-21-92
Gold as Au, mg/l	<.01	0.01	EPA 231.1	10-02-92
Magnesium as Mg, mg/l	58.6	0.1	EPA 242.1	9-28-92
Nitrate as NO_3-N, mg/l	12.4	0.02	EPA 353.1	9-22-92
Potassium as K, mg/l	6.0	0.1	EPA 258.1	9-28-92
Sodium as Na, mg/l	78.3	0.1	EPA 273.1	9-25-92
Sulfate as SO_4, mg/l	749	0.5	EPA 375.4	9-21-92
Silver as Ag, mg/l	0.013	0.01	EPA 200.7	10-06-92
TDS, mg/l	1,692	5.0	EPA 160.1	9-18-92
Carbonate as CO3, mg/l	0	1.0	EPA 310.1	9-18-92

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TO: Tennecc Minerals Company
P.O. Box 2650
St. George, UT 84770

DATE: 10-07-92

SAMPLE ID: Lab #U081912 - September - Monitor Well Samples. MW0
Sampled 9-16-92

DATE SUBMITTED: 9-18-92

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED	MDL	METHOD	DATE ANALYZED
Alkalinity as $CaCO_3$, mg/l	280	1.0	EPA 310.1	9-18-92
pH Units	7.99	0-14	EPA 150.1	9-18-92
Arsenic as As, mg/l	<.05	0.05	EPA 200.7	10-06-92
Barium as Ba, mg/l	0.033	0.01	EPA 200.7	10-06-92
Chromium as Cr, mg/l	<.01	0.01	EPA 200.7	10-06-92
Iron as Fe, mg/l	0.06	0.01	EPA 236.1	10-01-92
Lead as Pb, mg/l	<.01	0.01	EPA 200.7	10-06-92
Manganese as Mn, mg/l	<.01	0.01	EPA 200.7	10-06-92
Mercury as Hg, mg/l	<.0005	0.0005	EPA 245.1	9-30-92
Selenium as Se, mg/l	<.02	0.02	EPA 200.7	10-03-92
Zinc as Zn, mg/l	0.010	0.01	EPA 200.7	10-06-92
Hardness as $CaCO_3$, mg/l	1.060	1.0	EPA 130.2	9-18-92

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TO: Tenneco Minerals Company
P.O. Box 2650
St. George, UT 84770

DATE: 1-11-93

SAMPLE ID: Lab #U089113 - Monitor Well, MW-7, 12-21-92

DATE SUBMITTED: 12-23-92

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED	MDL	METHOD	DATE ANALYZED
Ammonia as NH_3-N, mg/l	0.72	0.2	EPA 350.3	12-28-92
Bicarbonate as HCO_3, mg/l	288	1.0	EPA 310.1	12-30-92
Cadmium as Cd, mg/l	<.01	0.01	EPA 200.7	12-30-92
Conductivity, umhos/cm	2,140	1.0	EPA 120.1	12-23-92
Cyanide as CN (T), mg/l	<.005	0.005	D2036-87	12-29-92
Cyanide as CN (Free), mg/l	<.005	0.005	D2036-87	12-29-92
WAD Cyanide as CN, mg/l	<.005	0.005	D2036-87	12-29-92
Calcium as Ca, mg/l	353	0.1	EPA 215.1	1-05-93
Chloride as Cl, mg/l	110	0.5	EPA 325.3	12-23-92
Cobalt as Co, mg/l	<.01	0.01	EPA 200.7	12-30-92
Copper as Cu, mg/l	<.01	0.01	EPA 200.7	12-30-92
Fluoride as F, mg/l	0.64	0.1	EPA 340.1	12-23-92
Gold as Au, mg/l	<.01	0.01	EPA 231.1	1-06-93
Magnesium as Mg, mg/l	62.0	0.1	EPA 242.1	1-05-93
Nitrate as NO_3-N, mg/l	9.65	0.02	EPA 353.1	12-23-92
Potassium as K, mg/l	6.5	0.1	EPA 258.1	1-04-93
Sodium as Na, mg/l	80.0	0.1	EPA 273.1	1-05-93
Sulfate as SO_4, mg/l	791	0.5	EPA 375.4	12-28-92
Silver as Ag, mg/l	<.01	0.01	EPA 200.7	1-04-93
TDS, mg/l	1,704	5.0	EPA 160.1	12-28-92
Carbonate as CO3, mg/l	0	1.0	EPA 310.1	12-30-92

Russell Ruckman

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TO: Tenneco Minerals Company
P.O. Box 2650
St. George, UT 84770

DATE: 1-11-93

SAMPLE ID: Lab #U089113 - Monitor Well, MW-7, 12-21-92

DATE SUBMITTED: 12-23-92

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED	MDL	METHOD	DATE ANALYZED
Alkalinity as $CaCO_3$, mg/l	236	1.0	EPA 310.1	12-30-92
pH Units	7.25	0-14	EPA 150.1	12-23-92
Arsenic as As, mg/l	<.05	0.05	EPA 200.7	1-05-93
Barium as Ba, mg/l	0.040	0.01	EPA 200.7	12-30-92
Chromium as Cr, mg/l	0.011	0.01	EPA 200.7	12-30-92
Iron as Fe, mg/l	0.374	0.01	EPA 236.1	12-30-92
Lead as Pb, mg/l	<.01	0.01	EPA 200.7	12-30-92
Manganese as Mn, mg/l	0.014	0.01	EPA 200.7	12-30-92
Mercury as Hg, mg/l	<.0002	0.0002	EPA 245.1	12-28-92
Selenium as Se, mg/l	<.05	0.05	EPA 200.7	1-05-93
Zinc as Zn, mg/l	0.020	0.01	EPA 200.7	12-30-92
Hardness as $CaCO_3$, mg/l	1,134	1.0	EPA 130.2	12-24-92

Russell Ruckman

Russell Ruckman

CHEMTECH

ANALYTICAL LABORATORY

6100 S. STRATLER
MURRAY, UTAH 84107
PHONE: (801) 262-7299
FAX: (801) 262-7378

TO: Tenneco Minerals Company
P.O. Box 2650
St. George, UT 84770

DATE: 10-07-92

SAMPLE ID: Lab #U081905 - September - Monitor Well Samples, MW7
Sampled 9-16-92

DATE SUBMITTED: 9-18-92

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED	MDL	METHOD	DATE ANALYZED
Ammonia as NH_3-N, mg/l	0.95	0.2	EPA 350.3	9-21-92
Bicarbonate as HCO_3, mg/l	349	1.0	EPA 310.1	9-18-92
Cadmium as Cd, mg/l	<.01	0.01	EPA 200.7	10-06-92
Conductivity, umhos/cm	1,992	1.0	EPA 120.1	9-18-92
Cyanide as CN (T), mg/l	0.011	0.005	D2036-87	9-23-92
Cyanide as CN (Free), mg/l	<.005	0.005	D2036-87	9-23-92
WAD Cyanide as CN, mg/l	<.005	0.005	D2036-87	9-23-92
Calcium as Ca, mg/l	368	0.1	EPA 215.1	9-28-92
Chloride as Cl, mg/l	119	0.5	EPA 325.3	9-18-92
Cobalt as Co, mg/l	<.01	0.01	EPA 200.7	10-06-92
Copper as Cu, mg/l	<.01	0.01	EPA 200.7	10-06-92
Fluoride as F, mg/l	0.63	0.1	EPA 340.1	9-21-92
Gold as Au, mg/l	<.01	0.01	EPA 231.1	10-02-92
Magnesium as Mg, mg/l	58.9	0.1	EPA 242.1	9-28-92
Nitrate as NO_3-N, mg/l	13.8	0.02	EPA 353.1	9-22-92
Potassium as K, mg/l	5.9	0.1	EPA 258.1	9-28-92
Sodium as Na, mg/l	79.1	0.1	EPA 273.1	9-25-92
Sulfate as SO_4, mg/l	760	0.5	EPA 375.4	9-21-92
Silver as Ag, mg/l	<.01	0.01	EPA 200.7	10-06-92
TDS, mg/l	1,666	5.0	EPA 160.1	9-18-92
Carbonate as CO3, mg/l	0	1.0	EPA 310.1	9-18-92

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DATE: 10-07-92

SAMPLE ID: Lab #U081905 - September - Monitor Well Samples, MW7
Sampled 9-16-92

DATE SUBMITTED: 9-18-92

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED	MDL	METHOD	DATE ANALYZED
Alkalinity as $CaCO_3$, mg/l	286	1.0	EPA 310.1	9-18-92
pH Units	7.85	0-14	EPA 150.1	9-18-92
Arsenic as As, mg/l	<.05	0.05	EPA 200.7	10-06-92
Barium as Ba, mg/l	0.032	0.01	EPA 200.7	10-06-92
Chromium as Cr, mg/l	<.01	0.01	EPA 200.7	10-06-92
Iron as Fe, mg/l	0.04	0.01	EPA 236.1	10-01-92
Lead as Pb, mg/l	<.01	0.01	EPA 200.7	10-06-92
Manganese as Mn, mg/l	<.01	0.01	EPA 200.7	10-06-92
Mercury as Hg, mg/l	<.0005	0.0005	EPA 245.1	9-30-92
Selenium as Se, mg/l	<.02	0.02	EPA 200.7	10-03-92
Zinc as Zn, mg/l	0.011	0.01	EPA 200.7	10-06-92
Hardness as $CaCO_3$, mg/l	1,057	1.0	EPA 130.2	9-18-92

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TO: Tenneco Minerals Company
P.O. Box 2650
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DATE: 7-10-92

SAMPLE ID: Lab #U078758 - Monitoring Wells, MW-7, 6-11-92

DATE SUBMITTED: 6-16-92

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED	MDL	METHOD	DATE ANALYZED
Ammonia as NH_3-N, mg/l	0.24	0.2	EPA 350.3	6-16-92
Bicarbonate as HCO_3, mg/l	262	1.0	EPA 310.1	6-24-92
Cadmium as Cd, mg/l	<.01	0.01	EPA 200.7	7-08-92
Conductivity, umhos/cm	1,850	1.0	EPA 120.1	6-17-92
Cyanide as CN (T), mg/l	<.005	0.005	D2036-87	6-19-92
Cyanide as CN (Free), mg/l	<.005	0.005	D2036-87	6-19-92
WAD Cyanide as CN, mg/l	<.005	0.005	D2036-87	6-19-92
Calcium as Ca, mg/l	363	0.1	EPA 215.1	7-02-92
Chloride as Cl, mg/l	111	0.5	EPA 325.3	6-17-92
Cobalt as Co, mg/l	<.01	0.01	EPA 200.7	7-08-92
Copper as Cu, mg/l	<.01	0.01	EPA 200.7	7-08-92
Fluoride as F, mg/l	0.61	0.1	EPA 340.1	6-18-92
Gold as Au, mg/l	<.01	0.01	EPA 231.1	7-08-92
Magnesium as Mg, mg/l	55.6	0.1	EPA 242.1	7-02-92
Nitrate as NO_3-N, mg/l	15.7	0.02	EPA 353.1	6-17-92
Potassium as K, mg/l	6.4	0.1	EPA 258.1	7-02-92
Sodium as Na, mg/l	77.3	0.1	EPA 273.1	7-01-92
Sulfate as SO_4, mg/l	727	0.5	EPA 375.4	6-22-92
Silver as Ag, mg/l	<.01	0.01	EPA 200.7	7-08-92
TDS, mg/l	1,520	5.0	EPA 160.1	6-16-92
Carbonate as CO3, mg/l	0	1.0	EPA 310.1	6-24-92

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DATE: 7-10-92

SAMPLE ID: Lab #U078758 - Monitoring Wells, MW-7, 6-11-92

DATE SUBMITTED: 6-16-92

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED	MDL	METHOD	DATE ANALYZED
Alkalinity as $CaCO_3$, mg/l	214	1.0	EPA 310.1	6-24-92
pH Units	7.99	0-14	EPA 150.1	6-16-92
Arsenic as As, mg/l	<.05	0.05	EPA 200.7	7-08-92
Barium as Ba, mg/l	0.033	0.01	EPA 200.7	7-08-92
Chromium as Cr, mg/l	<.01	0.01	EPA 200.7	7-08-92
Iron as Fe, mg/l	0.150	0.01	EPA 236.1	6-26-92
Lead as Pb, mg/l	<.02	0.02	EPA 200.7	7-08-92
Manganese as Mn, mg/l	<.01	0.01	EPA 200.7	7-08-92
Mercury as Hg, mg/l	<.0005	0.0005	EPA 245.1	6-16-92
Selenium as Se, mg/l	0.009	0.005	EPA 200.7	7-08-92
Zinc as Zn, mg/l	0.106	0.01	EPA 200.7	7-08-92
Hardness as $CaCO_3$, mg/l	1,050	1.0	EPA 130.2	6-17-92

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TO: Tenneco Minerals Company
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St. George, UT 84770

DATE: 6-11-92

SAMPLE ID: Lab #U077831 - MW-7, 5-16-92

DATE SUBMITTED: 5-19-92

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED	MDL	METHOD	DATE ANALYZED
Ammonia as NH_3-N, mg/l	0.84	0.2	EPA 350.2	5-19-92
Bicarbonate as HCO_3, mg/l	262	1.0	EPA 310.1	5-21-92
Cadmium as Cd, mg/l	<.01	0.01	EPA 200.7	6-02-92
Conductivity, umhos/cm	1,788	1.0	EPA 120.1	5-21-92
Cyanide as CN (T), mg/l	<.005	0.005	D2036-87	5-26-92
Cyanide as CN (Free), mg/l	<.005	0.005	D2036-87	5-26-92
WAD Cyanide as CN, mg/l	<.005	0.005	D2036-87	5-26-92
Calcium as Ca, mg/l	345	0.1	EPA 215.1	5-21-92
Chloride as Cl, mg/l	99.0	0.5	EPA 325.3	5-20-92
Cobalt as Co, mg/l	<.01	0.01	EPA 200.7	6-02-92
Copper as Cu, mg/l	<.01	0.01	EPA 200.7	6-02-92
Fluoride as F, mg/l	0.54	0.1	EPA 340.1	5-21-92
Gold as Au, mg/l	<.01	0.01	EPA 231.1	6-01-92
Magnesium as Mg, mg/l	54.0	0.1	EPA 242.1	5-21-92
Nitrate as NO_3-N, mg/l	11.9	0.02	EPA 353.1	5-20-92
Potassium as K, mg/l	6.1	0.1	EPA 258.1	5-20-92
Sodium as Na, mg/l	74.9	0.1	EPA 273.1	5-20-92
Sulfate as SO_4, mg/l	728	0.5	EPA 375.4	5-27-92
Silver as Ag, mg/l	<.01	0.01	EPA 200.7	6-02-92
TDS, mg/l	1,630	5.0	EPA 160.1	5-19-92
Carbonate as CO3, mg/l	0	1.0	EPA 310.1	5-21-92

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DATE: 6-11-92

SAMPLE ID: Lab #U077831 - MW-7, 5-16-92

DATE SUBMITTED: 5-19-92

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED	MDL	METHOD	DATE ANALYZED
Alkalinity as $CaCO_3$, mg/l	214	1.0	EPA 310.1	5-21-92
pH Units	7.78	0-14	EPA 150.1	5-19-92
Arsenic as As, mg/l	<.05	0.05	EPA 200.7	6-02-92
Barium as Ba, mg/l	0.032	0.01	EPA 200.7	6-02-92
Chromium as Cr, mg/l	<.01	0.01	EPA 200.7	6-02-92
Iron as Fe, mg/l	0.142	0.01	EPA 236.1	5-26-92
Lead as Pb, mg/l	<.01	0.01	EPA 200.7	6-02-92
Manganese as Mn, mg/l	<.01	0.01	EPA 200.7	6-02-92
Mercury as Hg, mg/l	<.0005	0.0005	EPA 245.2	5-27-92
Selenium as Se, mg/l	0.012	0.005	EPA 200.7	6-02-92
Zinc as Zn, mg/l	<.01	0.01	EPA 200.7	6-02-92
Hardness as $CaCO_3$, mg/l	1,001	1.0	EPA 130.2	5-20-92

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TO: Tenneco Minerals Company
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DATE: 5-19-92

SAMPLE ID: Lab #U077081 - MW7, 4-27-92

DATE SUBMITTED: 4-29-92

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED	MDL	METHOD
Ammonia as NH_3-N, mg/l	0.320	0.2	EPA 350.3
Bicarbonate as HCO_3, mg/l	256	1.0	EPA 310.1
Cadmium as Cd, mg/l	<.01	0.01	EPA 200.7
Conductivity, umhos/cm	1,807	1.0	EPA 120.1
Cyanide as CN (T), mg/l	0.005	0.005	D2036-87
Cyanide as CN (Free), mg/l	<.005	0.005	D2036-87
WAD Cyanide as CN, mg/l	<.005	0.005	D2036-87
Calcium as Ca, mg/l	354	0.1	EPA 215.1
Chloride as Cl, mg/l	90.9	0.5	EPA 325.3
Cobalt as Co, mg/l	<.01	0.01	EPA 200.7
Copper as Cu, mg/l	<.01	0.01	EPA 200.7
Fluoride as F, mg/l	1.05	0.1	EPA 340.1
Gold as Au, mg/l	<.01	0.01	EPA 231.1
Magnesium as Mg, mg/l	55.2	0.1	EPA 242.1
Nitrate as NO_3-N, mg/l	11.8	0.02	EPA 353.1
Potassium as K, mg/l	4.9	0.1	EPA 258.1
Sodium as Na, mg/l	74.8	0.1	EPA 273.1
Sulfate as SO_4, mg/l	726	0.5	EPA 375.4
Silver as Ag, mg/l	<.01	0.01	EPA 200.7
TDS, mg/l	1,514	5.0	EPA 160.1
Carbonate as CO3, mg/l	0	1.0	EPA 310.1

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St. George, UT 84770

DATE: 5-19-92

SAMPLE ID: Lab #U077081 - MW7, 4-27-92

DATE SUBMITTED: 4-29-92

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED	MDL	METHOD
Alkalinity as $CaCO_3$, mg/l	210	1.0	EPA 310.1
pH Units	7.89	0-14	EPA 150.1
Arsenic as As, mg/l	<.05	0.05	EPA 200.7
Barium as Ba, mg/l	0.030	0.01	EPA 200.7
Chromium as Cr, mg/l	<.01	0.01	EPA 200.7
Iron as Fe, mg/l	0.090	0.01	EPA 236.1
Lead as Pb, mg/l	0.014	0.01	EPA 200.7
Manganese as Mn, mg/l	<.01	0.01	EPA 200.7
Mercury as Hg, mg/l	<.0005	0.0005	EPA 245.1
Selenium as Se, mg/l	<.005	0.005	EPA 200.7
Zinc as Zn, mg/l	0.070	0.01	EPA 200.7
Hardness as $CaCO_3$, mg/l	984	1.0	EPA 130.2

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TO: Tenneco Minerals Company
P.O. Box 2650
St. George, UT 84770

DATE: 3-30-92

SAMPLE ID: Lab #U075474 - Monitor Well Samples, MW-7, Samp. 3-13-92

DATE SUBMITTED: 3-17-92

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED
Ammonia as NH_3-N, mg/l	<.2
Bicarbonate as HCO_3, mg/l	332
Cadmium as Cd, mg/l	<.01
Conductivity, umhos/cm	1,830
Cyanide as CN (T), mg/l	<.005
Cyanide as CN (Free), mg/l	<.005
WAD Cyanide as CN, mg/l	<.005
Calcium as Ca, mg/l	356
Chloride as Cl, mg/l	87.7
Cobalt as Co, mg/l	<.01
Copper as Cu, mg/l	<.01
Fluoride as F, mg/l	0.88
Gold as Au, mg/l	<.01
Magnesium as Mg, mg/l	49.5
Nitrate as NO_3-N, mg/l	11.3
Potassium as K, mg/l	5.9
Sodium as Na, mg/l	72
Sulfate as SO_4, mg/l	683
Silver as Ag, mg/l	<.01
TDS, mg/l	1,490
Carbonate as CO3, mg/l	0

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TO: Tenneco Minerals Company
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St. George, UT 84770

DATE: 3-30-92

SAMPLE ID: Lab #U075474 - Monitor Well Samples, MW-7, Samp. 3-13-92

DATE SUBMITTED: 3-17-92

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED
Alkalinity as $CaCO_3$, mg/l	272
pH Units	8.01
Arsenic as As, mg/l	<.05
Barium as Ba, mg/l	0.029
Chromium as Cr, mg/l	<.01
Iron as Fe, mg/l	0.065
Lead as Pb, mg/l	<.01
Manganese as Mn, mg/l	<.01
Mercury as Hg, mg/l	<.0005
Selenium as Se, mg/l	0.015
Zinc as Zn, mg/l	0.018
Hardness as $CaCO_3$, mg/l	973

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TO: Tenneco Minerals Company
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St. George, UT 84770

DATE: 3-17-92

SAMPLE ID: Lab #U074783 - Monitor Well Samples, MW-7, Samp. 2-25-92

DATE SUBMITTED: 2-28-92

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED
Ammonia as NH_3-N, mg/l	0.373
Bicarbonate as HCO_3, mg/l	313
Cadmium as Cd, mg/l	<.01
Conductivity, umhos/cm	1,767
Cyanide as CN (T), mg/l	<.005
Cyanide as CN (Free), mg/l	<.005
WAD Cyanide as CN, mg/l	<.005
Calcium as Ca, mg/l	300
Chloride as Cl, mg/l	96.9
Cobalt as Co, mg/l	<.01
Copper as Cu, mg/l	<.01
Fluoride as F, mg/l	0.89
Gold as Au, mg/l	<.01
Magnesium as Mg, mg/l	46.0
Nitrate as NO_3-N, mg/l	9.12
Potassium as K, mg/l	6.1
Sodium as Na, mg/l	74
Sulfate as SO_4, mg/l	639
Silver as Ag, mg/l	<.01
TDS, mg/l	1,474
Carbonate as CO3, mg/l	0

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TO: Tenneco Minerals Company
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St. George, UT 84770

DATE: 3-17-92

SAMPLE ID: Lab #U074783 - Monitor Well Samples, MW-7, Samp. 2-25-92

DATE SUBMITTED: 2-28-92

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED
Alkalinity as $CaCO_3$, mg/l	257
pH Units	8.03
Arsenic as As, mg/l	<.05
Barium as Ba, mg/l	0.028
Chromium as Cr, mg/l	<.01
Iron as Fe, mg/l	0.050
Lead as Pb, mg/l	<.01
Manganese as Mn, mg/l	<.01
Mercury as Hg, mg/l	<.0005
Selenium as Se, mg/l	0.007
Zinc as Zn, mg/l	0.015
Hardness as $CaCO_3$ (Diss), mg/l	976

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TO: Tenneco Minerals Company
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St. George, UT 84770

DATE: 2-10-92

SAMPLE ID: Lab #U073407 - Monitor Well Samples, MW-7, Samp. 1-24-92

DATE SUBMITTED: 1-28-92

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED
Ammonia as NH_3-N, mg/l	<.2
Bicarbonate as HCO_3, mg/l	314
Cadmium as Cd, mg/l	<.01
Conductivity, umhos/cm	1,813
Cyanide as CN (T), mg/l	<.005
Cyanide as CN (Free), mg/l	<.005
WAD Cyanide as CN, mg/l	<.005
Calcium as Ca, mg/l	314
Chloride as Cl, mg/l	123
Cobalt as Co, mg/l	<.01
Copper as Cu, mg/l	<.01
Fluoride as F, mg/l	0.96
Gold as Au, mg/l	<.01
Magnesium as Mg, mg/l	50.2
Nitrate as NO_3-N, mg/l	7.19
Potassium as K, mg/l	5.3
Sodium as Na, mg/l	69.0
Sulfate as SO_4, mg/l	597
Silver as Ag, mg/l	<.01
TDS, mg/l	1,384
Carbonate as CO3, mg/l	0

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TO: Tenneco Minerals Company
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St. George, UT 84770

DATE: 2-10-92

SAMPLE ID: Lab #U073407 - Monitor Well Samples, MW-7, Samp. 1-24-92

DATE SUBMITTED: 1-28-92

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED
Alkalinity as $CaCO_3$, mg/l	258
pH Units	7.74
Arsenic as As, mg/l	0.024
Barium as Ba, mg/l	0.028
Chromium as Cr, mg/l	<.01
Iron as Fe, mg/l	0.041
Lead as Pb, mg/l	<.01
Manganese as Mn, mg/l	<.01
Mercury as Hg, mg/l	<.0005
Selenium as Se, mg/l	0.005
Zinc as Zn, mg/l	<.01
Hardness as $CaCO_3$, mg/l	940

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TO: Tenneco Minerals Company
P.O. Box 2650
St. George, UT 84770

DATE: 11-11-91

SAMPLE ID: Lab #U070032 - Monitor Well Samples, MW-7, Samp. 10-14-91

DATE SUBMITTED: 10-25-91

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED
Ammonia as NH_3-N, mg/l	<.2
Bicarbonate as HCO_3, mg/l	314
Cadmium as Cd, mg/l	<.01
Conductivity, umhos/cm	1,761
Cyanide as CN (T), mg/l	<.005
Cyanide as CN (Free), mg/l	<.005
WAD Cyanide as CN, mg/l	<.005
Calcium as Ca, mg/l	306
Chloride as Cl, mg/l	131
Cobalt as Co, mg/l	<.01
Copper as Cu, mg/l	<.01
Fluoride as F, mg/l	0.99
Gold as Au, mg/l	<.01
Magnesium as Mg, mg/l	58.5
Nitrate as NO_3-N, mg/l	5.92
Potassium as K, mg/l	6.6
Sodium as Na, mg/l	65.6
Sulfate as SO_4, mg/l	565
Silver as Ag, mg/l	<.01
TDS, mg/l	1,352
Carbonate as CO3, mg/l	0

Rex Henderson

CHEMTECH
ANALYTICAL LABORATORY

6100 S. STRATLER
MURRAY, UTAH 84107
PHONE: (801) 262-7299
FAX: (801) 262-7378

TO: Tenneco Minerals Company
P.O. Box 2650
St. George, UT 84770

DATE: 11-11-91

SAMPLE ID: Lab #U070032 -Monitor Well Samples, MW-7, Samp. 10-14-91

DATE SUBMITTED: 10-25-91

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED
Alkalinity as $CaCO_3$, mg/l	258
pH Units	7.83
Arsenic as As, mg/l	<.01
Barium as Ba, mg/l	0.031
Chromium as Cr, mg/l	<.01
Iron as Fe, mg/l	0.010
Lead as Pb, mg/l	<.01
Manganese as Mn, mg/l	<.01
Mercury as Hg, mg/l	<.0002
Selenium as Se, mg/l	0.007
Zinc as Zn, mg/l	<.01
Hardness as $CaCO_3$, mg/l	904

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TO: Tenneco Minerals Company
P.O. Box 2650
St. George, UT 84770

DATE: 12-09-91

SAMPLE ID: Lab #U071373 - Monitor Well Samples, MW7, 11-24-91

DATE SUBMITTED: 11-26-91

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED
Ammonia as NH_3-N, mg/l	<.2
Bicarbonate as HCO_3, mg/l	344
Cadmium as Cd, mg/l	<.01
Conductivity, umhos/cm	1,800
Cyanide as CN (T), mg/l	0.012
Cyanide as CN (Free), mg/l	<.005
WAD Cyanide as CN, mg/l	<.005
Calcium as Ca, mg/l	295
Chloride as Cl, mg/l	127
Cobalt as Co, mg/l	<.01
Copper as Cu, mg/l	<.01
Fluoride as F, mg/l	0.88
Gold as Au, mg/l	<.01
Magnesium as Mg, mg/l	48
Nitrate as NO_3-N, mg/l	2.05
Potassium as K, mg/l	5.1
Sodium as Na, mg/l	68.2
Sulfate as SO_4, mg/l	606
Silver as Ag, mg/l	<.01
TDS, mg/l	1,402
Carbonate as CO3, mg/l	0

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FAX: (801) 262-7378

TO: Tenneco Minerals Company
P.O. Box 2650
St. George, UT 84770

DATE: 12-09-91

SAMPLE ID: Lab #U071373 - Monitor Well Samples, MW7, 11-24-91

DATE SUBMITTED: 11-26-91

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED
Alkalinity as $CaCO_3$, mg/l	282
pH Units	8.09
Arsenic as As, mg/l	0.028
Barium as Ba, mg/l	0.032
Chromium as Cr, mg/l	<.01
Iron as Fe, mg/l	0.090
Lead as Pb, mg/l	<.01
Manganese as Mn, mg/l	<.01
Mercury as Hg, mg/l	<.0005
Selenium as Se, mg/l	0.015
Zinc as Zn, mg/l	0.012
Hardness as $CaCO_3$, mg/l	901

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TO: Tenneco Minerals Company
P.O. Box 2650
St. George, UT 84770

DATE: 1-03-92

SAMPLE ID: Lab #U072239 - Goldstrike Monitor Wells, MW7, 12-17-91

DATE SUBMITTED: 12-19-91

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED
Ammonia as NH_3-N, mg/l	<.2
Bicarbonate as HCO_3, mg/l	370
Cadmium as Cd, mg/l	<.01
Conductivity, umhos/cm	1,739
Cyanide as CN (T), mg/l	0.006
Cyanide as CN (Free), mg/l	<.005
WAD Cyanide as CN, mg/l	<.005
Calcium as Ca, mg/l	315
Chloride as Cl, mg/l	121
Cobalt as Co, mg/l	<.01
Copper as Cu, mg/l	<.01
Fluoride as F, mg/l	0.88
Gold as Au, mg/l	<.01
Magnesium as Mg, mg/l	50.2
Nitrate as NO_3-N, mg/l	6.36
Potassium as K, mg/l	4.8
Sodium as Na, mg/l	67.0
Sulfate as SO_4, mg/l	606
Silver as Ag, mg/l	<.01
TDS, mg/l	1,402
Carbonate as CO3, mg/l	0

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TO: Tenneco Minerals Company
P.O. Box 2650
St. George, UT 84770

DATE: 1-03-92

SAMPLE ID: Lab #U072239 - Goldstrike Monitor Wells, MW7, 12-17-91

DATE SUBMITTED: 12-19-91

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED
Alkalinity as $CaCO_3$, mg/l	304
pH Units	8.17
Arsenic as As, mg/l	0.022
Barium as Ba, mg/l	0.027
Chromium as Cr, mg/l	<.01
Iron as Fe, mg/l	0.065
Lead as Pb, mg/l	<.01
Manganese as Mn, mg/l	<.01
Mercury as Hg, mg/l	<.0005
Selenium as Se, mg/l	0.012
Zinc as Zn, mg/l	<.01
Hardness as $CaCO_3$, mg/l	876

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TO: Tenneco Minerals Company
P.O. Box 2650
St. George, UT 84770

DATE: 9-27-91

SAMPLE ID: Lab #U068545 - Monitor Well Samples, MW-#7, Samp. 9-09-91

DATE SUBMITTED: 9-12-91

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED
Ammonia as NH_3-N, mg/l	<.2
Bicarbonate as HCO_3, mg/l	324
Cadmium as Cd, mg/l	<.01
Conductivity, umhos/cm	1,754
Cyanide as CN (T), mg/l	<.005
Cyanide as CN (Free), mg/l	<.005
WAD Cyanide as CN, mg/l	<.005
Calcium as Ca, mg/l	240
Chloride as Cl, mg/l	135
Cobalt as Co, mg/l	<.01
Copper as Cu, mg/l	<.01
Fluoride as F, mg/l	0.95
Gold as Au, mg/l	<.01
Magnesium as Mg, mg/l	50.0
Nitrate as NO_3-N, mg/l	2.01
Potassium as K, mg/l	5.5
Sodium as Na, mg/l	94.5
Sulfate as SO_4, mg/l	559
Silver as Ag, mg/l	<.01
TDS, mg/l	1,394
Carbonate as CO3, mg/l	0

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FAX: (801) 262-7378

TO: Tenneco Minerals Company
P.O. Box 2650
St. George, UT 84770

DATE: 9-27-91

SAMPLE ID: Lab #U068545 - Monitor Well Samples, MW-#7, Samp. 9-09-91

DATE SUBMITTED: 9-12-91

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED
Alkalinity as $CaCO_3$, mg/l	266
pH Units	8.08
Arsenic as As, mg/l	0.028
Barium as Ba, mg/l	0.043
Chromium as Cr, mg/l	<.01
Iron as Fe, mg/l	<.01
Lead as Pb, mg/l	<.01
Manganese as Mn, mg/l	<.01
Mercury as Hg, mg/l	<.0002
Selenium as Se, mg/l	0.007
Zinc as Zn, mg/l	0.013
Hardness as $CaCO_3$, mg/l	954

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TO: Tenneco Minerals Company
P.O. Box 2650
St. George, UT 84770

DATE: 9-17-91

SAMPLE ID: Lab #U068369 - Monitor Well Samples, MW7, Samp. 8-26-91

DATE SUBMITTED: 9-05-91

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED
Ammonia as NH_3-N, mg/l	<.2
Bicarbonate as HCO_3, mg/l	292
Cadmium as Cd, mg/l	0.016
Conductivity, umhos/cm	1,662
Cyanide as CN (T), mg/l	0.007
Cyanide as CN (Free), mg/l	<.005
WAD Cyanide as CN, mg/l	<.005
Calcium as Ca, mg/l	239
Chloride as Cl, mg/l	134
Cobalt as Co, mg/l	<.01
Copper as Cu, mg/l	<.01
Fluoride as F, mg/l	0.88
Gold as Au, mg/l	<.01
Magnesium as Mg, mg/l	49.0
Nitrate as NO_3-N, mg/l	3.93
Potassium as K, mg/l	5.6
Sodium as Na, mg/l	94.4
Sulfate as SO_4, mg/l	552
Silver as Ag, mg/l	<.01
TDS, mg/l	1,426
Carbonate as CO3, mg/l	0

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TO: Tenneco Minerals Company
P.O. Box 2650
St. George, UT 84770

DATE: 9-17-91

SAMPLE ID: Lab #U068369 - Monitor Well Samples, MW7, Samp. 8-26-91

DATE SUBMITTED: 9-05-91

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED
Alkalinity as $CaCO_3$, mg/l	239
pH Units	8.01
Arsenic as As, mg/l	0.019
Barium as Ba, mg/l	0.046
Chromium as Cr, mg/l	<.01
Iron as Fe, mg/l	0.090
Lead as Pb, mg/l	<.01
Manganese as Mn, mg/l	<.01
Mercury as Hg, mg/l	<.0002
Selenium as Se, mg/l	<.002
Zinc as Zn, mg/l	0.014
Hardness as $CaCO_3$, mg/l	901

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FAX: (801) 262-7378

TO: Tenneco Minerals Company
P.O. Box 2650
St. George, UT 84770

DATE: 8-06-91

SAMPLE ID: Lab #U066976 - Monitor Well Samples, MW-7
Sampled 7-23-91

DATE SUBMITTED: 7-25-91

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED
Ammonia as NH_3-N, mg/l	<.2
Bicarbonate as HCO_3, mg/l	288
Cadmium as Cd, mg/l	<.01
Cyanide as CN (T), mg/l	0.007
Cyanide as CN (Free), mg/l	<.005
Calcium as Ca, mg/l	194
Chloride as Cl, mg/l	130
Cobalt as Co, mg/l	<.01
Copper as Cu, mg/l	<.01
Fluoride as F, mg/l	0.86
Gold as Au, mg/l	<.01
Magnesium as Mg, mg/l	50.6
Nitrate as NO_3-N, mg/l	0.49
Potassium as K, mg/l	4.0
Sodium as Na, mg/l	94.9
Sulfate as SO_4, mg/l	564
Silver as Ag, mg/l	<.01
TDS, mg/l	1,320

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PHONE: (801) 262-7299
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DATE: 8-06-91

TO: Tenneco Minerals
P.O. Box 2650
St. George, Utah 84770

SAMPLE ID: Lab #U066976 - Monitor Well Samples. MW-7
Sampled 7-23-91

DATE SUBMITTED: 7-25-91

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED
Carbonate as CO_3, mg/l	0
Alkalinity as $CaCO_3$, mg/l	236
pH Units	7.58
Arsenic as As, mg/l	0.024
Barium as Ba, mg/l	0.030
Chromium as Cr, mg/l	<.01
Iron as Fe, mg/l	0.068
Lead as Pb, mg/l	<.01
Manganese as Mn, mg/l	<.01
Mercury as Hg, mg/l	<.002
Selenium as Se, mg/l	0.009
Zinc as Zn, mg/l	<.01
Hardness as $CaCO_3$, mg/l	872

Rex Henderson

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MURRAY, UTAH 84107
PHONE: (801) 262-7299
FAX: (801) 262-7378

TO: Tenneco Minerals Company
P.O. Box 2650
St. George, UT 84770

DATE: 7-10-91

SAMPLE ID: Lab #U065475 - Monitor Well Samples, MW-7, Samp. 6-22-91

DATE SUBMITTED: 6-25-91

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED
Ammonia as NH_3-N, mg/l	<.2
Bicarbonate as HCO_3, mg/l	348
Cadmium as Cd, mg/l	<.01
Cyanide as CN (T), mg/l	0.007
Cyanide as CN (Free), mg/l	<.005
Calcium as Ca, mg/l	210
Chloride as Cl, mg/l	138
Cobalt as Co, mg/l	<.01
Copper as Cu, mg/l	<.01
Fluoride as F, mg/l	0.95
Gold as Au, mg/l	<.01
Magnesium as Mg, mg/l	46.8
Nitrate as NO_3-N, mg/l	5.48
Potassium as K, mg/l	4.3
Sodium as Na, mg/l	97.1
Sulfate as SO_4, mg/l	469
Silver as Ag, mg/l	<.01
TDS, mg/l	1,394

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TO: Tenneco Minerals Company
P.O. Box 2650
St. George, UT 84770

DATE: 6-04-91

SAMPLE ID: Lab #U064163 - Monitor Well Samples, MW-7, Samp. 5-17-91

DATE SUBMITTED: 5-20-91

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED
Ammonia as NH_3-N, mg/l	<.2
Bicarbonate as HCO_3, mg/l	454
Cadmium as Cd, mg/l	<.01
Cyanide as CN (T), mg/l	<.002
Cyanide as CN (Free), mg/l	<.002
Calcium as Ca, mg/l	203
Chloride as Cl, mg/l	130
Cobalt as Co, mg/l	<.01
Copper as Cu, mg/l	0.072
Fluoride as F, mg/l	0.92
Gold as Au, mg/l	<.01
Magnesium as Mg, mg/l	64.8
Nitrate as NO_3-N, mg/l	2.25
Potassium as K, mg/l	4.5
Sodium as Na, mg/l	98.2
Sulfate as SO_4, mg/l	520
Silver as Ag, mg/l	<.01
TDS, mg/l	1,416

Rex Henderson